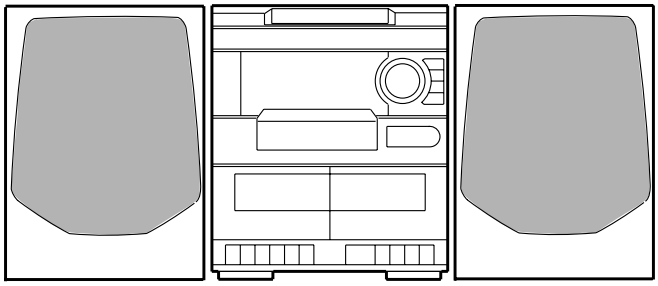
aiwa SERVICE

NSX-T99 EZ



SERVICE MANUAL

COMPACT DISC STEREO
CASSETTE RECEIVER

BASIC TAPE MECHANISM : 2ZM-3MK2 PR4NM
BASIC CD MECHANISM : 6ZG-1 ZRNDM

SYSTEM	CD CASSEIVER	SPEAKERS	REMOTE CONTROL
NSX-T99	CX-NT99	SX-WNT99	RC-ZAS04

• If requiring information about the CD mechanisim, see Service Manual of 6ZG-1, (S/M Code No. 09-001-338-7N2)

aiwa

S/M Code No. 09-005-426-5R2

SPECIFICATIONS

<FM Tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity(IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<MW Tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 uV/m
Antenna	Loop antenna

<LW Tuner section>

Tuning range	144 kHz to 290 kHz
Usable sensitivity	1400 uV/m
Antenna	Loop antenna

<Amplifier section>

Mid-high frequency amplifier

Power output*	Rated: 45 W + 45 W (8 ohms, THD 1 %,1 kHz / DIN 45500) Reference: 55 W + 55 W (8 ohms, THD 10 %,1 kHz / DIN 45324) DIN MUSIC POWER: 100 W + 100 W
Total harmonic distortion	0.3 % (28 W, 1 kHz, 8 ohms, DIN AUDIO)

Low frequency amplifier

Power output*	Rated: 135 W + 135 W (6 ohms, THD 1 %, 75 Hz / DIN 45500) Reference: 165 W + 165 W (6 ohms, THD 10 %, 75 Hz / DIN 45324) DIN MUSIC POWER: 310 W + 310 W
Total harmonic distortion	0.3 % (84 W, 75 Hz, 6 ohms, DIN AUDIO)

* without connecting to surround speakers

Inputs	VIDEO/AUX : 300 mV (adjustable) MD : 300 mV (adjustable) MIC1,MIC2 : 1.0 mV (10 kohms) LINE OUT : 150 mV
Outputs	SPEAKERS HIGH FREQ : accept speakers of 8 ohms or more SPEAKERS LOW FREQ : accept speakers of 6 ohms or more SURROUND SPEAKERS : accept speakers of 8 to 16 ohms PHONES (stereo jack) : accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	CrO2 tape: 50 Hz – 16000 Hz Normal tape: 50 Hz – 15000 Hz
Signal to noise ratio	60dB (Dolby B NR ON, CrO2 tape peak level)
Recording system	AC bias
Heads	Deck 1: Playback head x 1 Deck 2: Recording/Playback head x 1, erase head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	83 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<Speaker system SX–WNT99>

Cabinet type	4 way, built-in subwoofer
Speakers	Subwoofer : 200 mm ($7^7/_8$ in.) cone type Mid range: 100 mm (4 in.) cone type Tweeter : 60 mm ($2^3/_8$ in.) cone type Super Tweeter : 20 mm ($^{13}/_{16}$ in.) ceramic type
Impedance	6 ohms / 8 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	260 x 463 x 314 mm ($10^1/_4$ x $18^1/_4$ x $12^3/_8$ in.)
Weight	8.0 kg (17 lbs 10 oz)

<General>

Power requirements	230 V AC, 50Hz
Power consumption	255W
Dimensions of main unit	300 x 382.6 x 396.4mm ($11^7/_8$ x $15^1/_8$ x 15 $^5/_8$in.)
Weight of main unit	13.2 kg (29 lbs 2 oz)

Standby power consumption

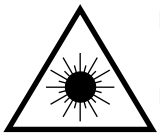
If the power-economizing mode is OFF: 37 W
If the power-economizing mode is ON: 0.9 W

- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol ⧫⧫ are trademarks of Dolby Laboratories Licensing Corporation.
- The word "BBE"and the "BBE symbol" are trademarks of BBE Sound, Inc.
  Under license from BBE Sound,Inc.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saataa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

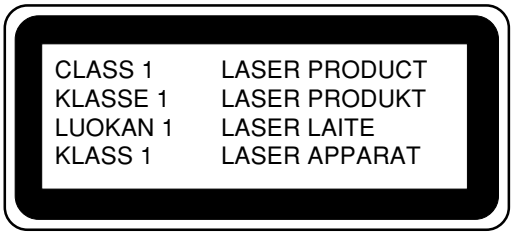
VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herin may result in hazardous radiation exposure.

ATTENTION
L'utillisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL
Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

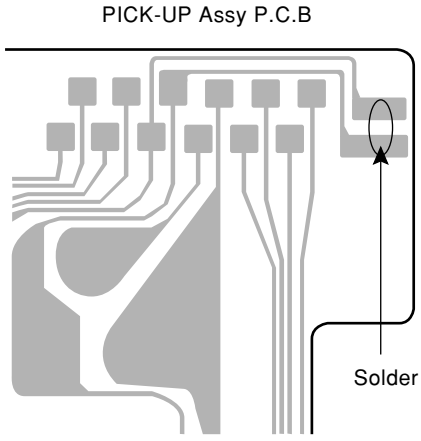


Precaution to replace Optical block

(KSS-213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in right figure.



NOTE ON BEFORE STARTING REPAIR

1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, secondary defect can occur.
In order to prevent the secondary trouble, perform the following measures before starting repair work.

Discharge procedure

① Remove the AC power cord.
② Connect a discharging resistor at an end of lead wire that has clips at both ends. Connect the other end of the lead wire to metal chassis.
③ Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
④ Contact the same end of the discharging resistor as step ③ to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
⑤ Check that voltage across C101 and C102 has decreased to 1 V or less using a multimeter or an oscilloscope.

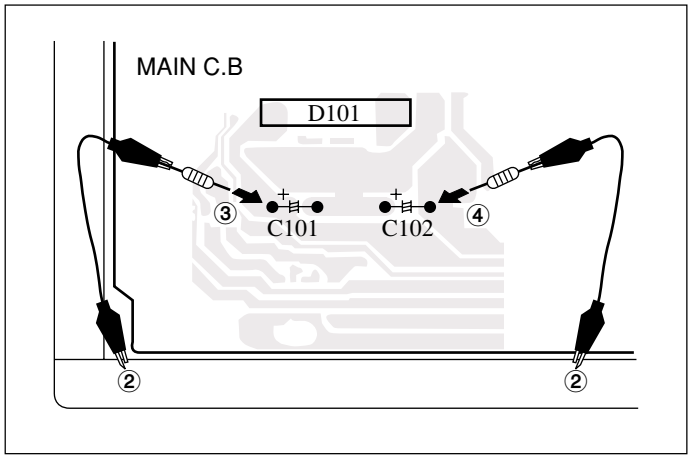


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor (Ω)	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitors on schematic diagram before starting the discharging work.

2. Check items before exchanging the MICROCOMPUTER

Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is "H", the MICROCOMPUTER is judged to be operating correctly. When this terminal is "L", the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.
When the MICROCOMPUTER is not defective, the HOLD terminal can also go "L" when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to "L".

- Good or no good judgement of the MICROCOMPUTER

① Turn on the AC main power.
② Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the "H" level or not.
③ When the HOLD terminal is "L" level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.

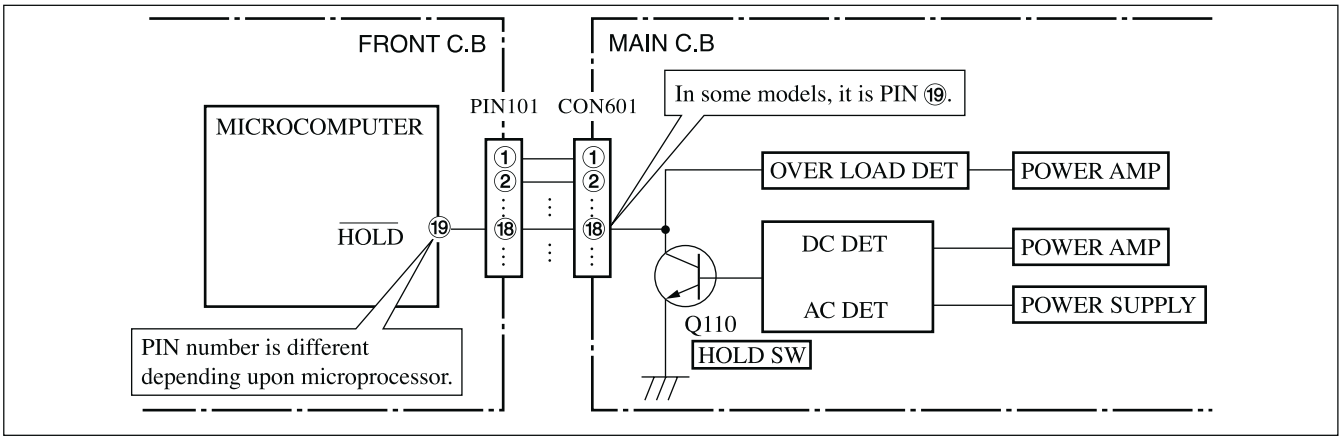


Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed.
When the above described phenomenon occurs, it can lead to wrong judgement as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

① Remove the AC power cord.

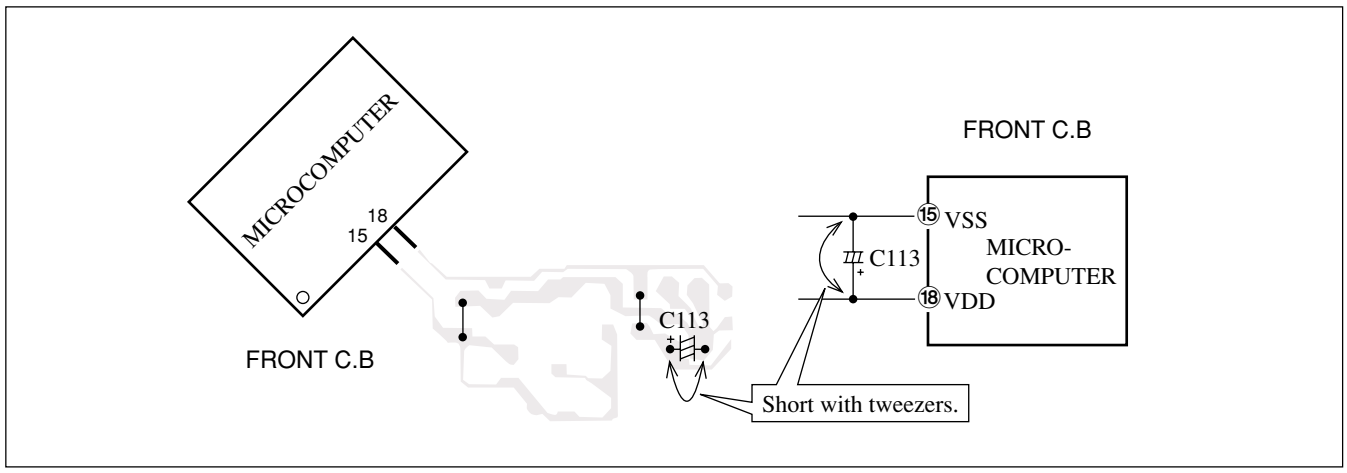


Fig-2-2

② Short both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.
③ Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

Note: The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

2-3. Confirmation of soldering state of MICROCOMPUTER

Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	8A-NF3-635-010		C-IC,LC876596W-5P49
	87-A21-482-010		IC,RPM6938-H4
	87-A20-869-040		C-IC,M62449FP
	87-A21-398-010		IC,STK490-110
	87-A20-355-010		IC,CXA1553P
	87-A20-783-040		C-IC,BA7762AFS
	87-A21-577-040		C-IC,M61506FP
	87-070-289-040		IC,BU 2092F
	87-A21-021-040		C-IC,BU2099FV
	87-A21-018-040		C-IC,M65849BFP631D
	87-A21-452-030		C-IC,BD3876KS2
	87-A20-440-040		C-IC,BU1920FS
	87-A21-560-010		IC,LA1844L-A
	87-070-127-110		IC,LC72131 D
	87-020-454-010		IC,DN 6851
TRANSISTOR			
	87-026-245-080		TR,DTC114ES
	87-A30-217-010		TR,2SB1436(R)
	87-A30-198-080		TR,KTC3199GR
	89-213-702-010		TR,2SB1370E
	87-A30-218-080		TR,2SB1237(Q)
	87-A30-087-080		C-FET,2SK2158
	87-A30-086-040		C-TR,CSD1306E
	87-A30-076-080		C-TR,2SC3052F
	87-A30-107-070		C-TR,CMBT5401
	87-A30-074-080		C-TR,RT1P 141C
	87-A30-190-080		TR,CC5551
	87-A30-105-080		C-TR,RT1P441C
	87-026-610-080		TR,KTC3198GR
	87-A30-106-040		C-TR,CMBT5551
	87-A30-276-040		C-TR,DTA143EKA
	87-A30-063-080		C-TR,KRA104S
	87-026-609-080		TR,KTA1266GR
	87-A30-186-010		FET,2SK3053
	87-A30-075-080		C-TR,2SA1235F
	87-A30-329-080		TR,CD1585BC
	87-A30-318-080		TR,CSA952K
	89-327-143-080		TR,2SC2714O
	87-A30-072-080		C-TR,RT1P 144C
	87-A30-234-080		TR,CSC4115BC
	89-503-602-080		C-FET,2SK360E
	87-A30-269-040		C-FET,2SJ461-T1
	87-A30-097-010		TR,FN1016
	87-A30-098-010		TR,FP1016
	87-A30-073-080		C-TR,RT1N141C
	87-026-463-080		TR,2SA933S
DIODE			
	87-A40-673-090		DIODE,D10XB20
	87-020-465-080		DIODE,1SS133
	87-A40-438-080		ZENER,MTZJ4.7A
	87-017-654-060		DIODE,GBU6JL6131
	87-A40-736-080		DIODE,1N4148M(SEM)
	87-A40-553-080		DIODE,1N4003 LES
	87-A40-781-080		ZENER,UZ36BSA
	87-070-274-080		DIODE,1N4003 SEM
	87-A40-768-080		ZENER,UZ16BSA
	87-017-154-080		ZENER,HZS6C3L
	87-A40-488-080		DIODE,1SS244
	87-020-331-080		CHIP-DIODE,DAN202K
	87-A40-313-080		C-DIODE,MC 2840
	87-A40-270-080		C-DIODE,MC2838
	87-A40-751-080		ZENER,UZ6.2BSB
	87-A40-269-080		C-DIODE,MC2836
	87-A40-747-080		ZENER,UZ5.1BSB
	87-A40-646-010		DIODE,FMB-G16L
	87-A40-764-080		ZENER,UZ10BSC
	87-017-149-080		ZENER,HZS6A2L
MAIN C.B			
C3	87-A10-712-080		C-CAP,S 0.22-50 F
C4	87-A10-712-080		C-CAP,S 0.22-50 F
C21	87-016-035-090		CAP, E 6800-35 VR
C22	87-016-035-090		CAP, E 6800-35 VR
C25	87-010-990-080		CAP,E 33-100 SME
C26	87-016-300-080		CAP,E 22-100 SME
C27	87-010-990-080		CAP,E 33-100 SME
C28	87-016-300-080		CAP,E 22-100 SME
C31	87-010-263-080		CAP, ELECT 100-10V
C32	87-010-197-080		CAP, CHIP 0.01 DM
C34	87-010-247-080		CAP, ELECT 100-50V
C35	87-010-406-080		CAP, ELECT 22-50V
C36	87-010-381-080		CAP, ELECT 330-16V
C38	87-010-393-080		CAP, ELECT 100-35V
C39	87-010-393-080		CAP, ELECT 100-35V
C40	87-010-190-080		S CHIP F 0.01
C60	87-010-403-080		CAP, ELECT 3.3-50V
C80	87-010-401-080		CAP, ELECT 1-50V
C81	87-010-374-080		CAP, ELECT 47-10V
C82	87-010-260-080		CAP, ELECT 47-25V
C104	87-010-196-080		CHIP CAPACITOR,0.1-25
C105	87-010-196-080		CHIP CAPACITOR,0.1-25
C111	87-010-401-080		CAP, ELECT 1-50V
C112	87-010-401-080		CAP, ELECT 1-50V
C115	87-010-401-080		CAP, ELECT 1-50V
C116	87-010-401-080		CAP, ELECT 1-50V
C121	87-010-406-080		CAP, ELECT 22-50
C122	87-010-406-080		CAP, ELECT 22-50
C151	87-010-405-080		CAP, ELECT 10-50V
C161	87-010-184-080		C-CAP,S 3300P-50 K B
C162	87-010-184-080		C-CAP,S 3300P-50 K B
C163	87-010-196-080		CHIP CAPACITOR,0.1-25
C171	87-012-368-080		C-CAP,S 0.1-50 F
C172	87-012-368-080		C-CAP,S 0.1-50 F
C173	87-012-368-080		C-CAP,S 0.1-50 F
C174	87-012-368-080		C-CAP,S 0.1-50 F
C175	87-A11-572-080		C-CAP,S 0.015-50 K B
C176	87-A11-572-080		C-CAP,S 0.015-50 K B
C177	87-010-197-080		CAP, CHIP 0.01 DM
C178	87-010-197-080		CAP, CHIP 0.01 DM
C301	87-010-318-080		C-CAP,S 47P-50 CH
C302	87-010-318-080		C-CAP,S 47P-50 CH
C303	87-012-157-080		C-CAP,S 330P-50 CH
C304	87-012-157-080		C-CAP,S 330P-50 CH
C305	87-012-157-080		C-CAP,S 330P-50 CH
C306	87-012-157-080		C-CAP,S 330P-50 CH
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C311	87-010-198-080		CAP, CHIP 0.022
C312	87-010-198-080		CAP, CHIP 0.022
C313	87-010-180-080		C-CER 1500P
C314	87-010-180-080		C-CER 1500P
C315	87-010-178-080		CHIP CAP 1000P
C316	87-010-178-080		CHIP CAP 1000P
C317	87-A10-201-080		C-CAP,S0.33-16 KB
C318	87-A10-201-080		C-CAP,S0.33-16 KB
C319	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C320	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C321	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C322	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C324	87-010-260-080		CAP, ELECT 47-25V
C325	87-010-370-080		CAP,E 330-6.3 SME
C327	87-010-404-080		CAP, ELECT 4.7-50V
C328	87-010-404-080		CAP, ELECT 4.7-50V
C332	87-010-196-080		CHIP CAPACITOR,0.1-25
C335	87-010-401-080		CAP, ELECT 1-50V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C336	87-010-401-080		CAP, ELECT 1-50V
C337	87-010-196-080		CHIP CAPACITOR,0.1-25
C339	87-010-196-080		CHIP CAPACITOR,0.1-25
C340	87-010-196-080		CHIP CAPACITOR,0.1-25
C351	87-012-140-080		CAP 470P
C352	87-012-140-080		CAP 470P
C354	87-010-175-080		CAP 560P
C355	87-012-349-080		C-CAP,S 1000P-50 CH
C356	87-010-260-080		CAP, ELECT 47-25V
C357	87-010-197-080		CAP, CHIP 0.01 DM
C358	87-010-183-080		C-CAP,S 2700P-50 B
C359	87-010-183-080		C-CAP,S 2700P-50 B
C360	87-010-183-080		C-CAP,S 2700P-50 B
C370	87-010-196-080		CHIP CAPACITOR,0.1-25
C371	87-010-175-080		CAP 560P
C372	87-010-175-080		CAP 560P
C373	87-010-179-080		CAP,CHIP S B1200P
C374	87-010-179-080		CAP,CHIP S B1200P
C375	87-010-545-080		CAP, ELECT 0.22-50V
C376	87-010-545-080		CAP, ELECT 0.22-50V
C378	87-010-196-080		CHIP CAPACITOR,0.1-25
C381	87-010-197-080		CAP, CHIP 0.01 DM
C382	87-010-318-080		C-CAP,S 47P-50 CH
C383	87-010-197-080		CAP, CHIP 0.01 DM
C384	87-010-402-080		CAP, ELECT 2.2-50V
C385	87-010-184-080		CHIP CAPACITOR 3300P(K)
C386	87-010-196-080		CHIP CAPACITOR,0.1-25
C388	87-012-156-080		C-CAP,S 220P-50 CH
C501	87-010-263-080		CAP, ELECT 100-10V
C502	87-010-196-080		CHIP CAPACITOR,0.1-25
C503	87-016-460-080		C-CAP,S 0.22-16 B
C504	87-016-460-080		C-CAP,S 0.22-16 B
C505	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C506	87-010-184-080		CHIP CAPACITOR 3300P(K)
C507	87-A11-550-080		C-CAP,S 820P-50 K B
C508	87-016-669-080		C-CAP,S 0.1-25 K B
C509	87-016-669-080		C-CAP,S 0.1-25 K B
C510	87-010-184-080		CHIP CAPACITOR 3300P(K)
C511	87-A11-550-080		C-CAP,S 820P-50 K B
C512	87-016-460-080		C-CAP,S 0.22-16 B
C513	87-010-544-080		CAP, ELECT 0.1-50V
C514	87-010-374-080		CAP, ELECT 47-10V
C515	87-010-401-080		CAP, ELECT 1-50V
C516	87-010-401-080		CAP, ELECT 1-50V
C517	87-010-183-080		C-CAP,S 2700P-50 B
C518	87-010-183-080		C-CAP,S 2700P-50 B
C531	87-010-560-080		CAP,E 10-50 GAS
C532	87-010-196-080		CHIP CAPACITOR,0.1-25
C533	87-010-196-080		CHIP CAPACITOR,0.1-25
C534	87-012-156-080		C-CAP,S 220P-50 CH
C535	87-010-178-080		CHIP CAP 1000P
C536	87-010-196-080		CHIP CAPACITOR,0.1-25
C538	87-010-318-080		C-CAP,S 47P-50 CH
C541	87-010-178-080		CHIP CAP 1000P
C603	87-010-318-080		C-CAP,S 47P-50 CH
C604	87-010-318-080		C-CAP,S 47P-50 CH
C605	87-010-318-080		C-CAP,S 47P-50 CH
C606	87-010-318-080		C-CAP,S 47P-50 CH
C611	87-010-956-080		CHIP-CAP,S 0.068-25B
C612	87-010-369-080		C-CAP,S 0.033-25 K B
C613	87-010-197-080		CAP, CHIP 0.01 DM
C614	87-016-669-080		C-CAP,S 0.1-25 K B
C616	87-010-180-080		C-CER 1500P
C617	87-010-198-080		CAP, CHIP 0.022
C618	87-010-401-080		CAP, ELECT 1-50V
C619	87-010-263-080		CAP, ELECT 100-10V
C620	87-016-669-080		C-CAP,S 0.1-25 K B
C621	87-010-197-080		CAP, CHIP 0.01 DM
C623	87-010-401-080		CAP, ELECT 1-50V
C624	87-010-401-080		CAP, ELECT 1-50V
C626	87-010-992-080		C-CAP,S 0.047-25 B
C627	87-010-400-080		CAP, ELECT 0.47-50V
C628	87-010-400-080		CAP, ELECT 0.47-50V
C629	87-010-992-080		C-CAP,S 0.047-25 B
C630	87-010-383-080		CAP, ELECT 33-25V
C631	87-010-185-080		C-CAP,S 3900P-50 B
C632	87-010-185-080		C-CAP,S 3900P-50 B
C634	87-010-196-080		CHIP CAPACITOR,0.1-25
C635	87-A10-307-080		CAP,M 0.1-50 J
C636	87-A10-307-080		CAP,M 0.1-50 J
C637	87-A10-307-080		CAP,M 0.1-50 J
C638	87-A10-307-080		CAP,M 0.1-50 J
C639	87-010-405-080		CAP, ELECT 10-50V
C641	87-010-401-080		CAP, ELECT 1-50V
C642	87-010-401-080		CAP, ELECT 1-50V
C643	87-010-196-080		CHIP CAPACITOR,0.1-25
C644	87-010-401-080		CAP, ELECT 1-50V
C671	87-010-322-080		C-CAP,S 100P-50 CH
C672	87-010-322-080		C-CAP,S 100P-50 CH
C673	87-010-197-080		CAP, CHIP 0.01 DM
C675	87-010-196-080		CHIP CAPACITOR,0.1-25
C679	87-010-196-080		CHIP CAPACITOR,0.1-25
C680	87-010-197-080		CAP, CHIP 0.01 DM
C682	87-010-196-080		CHIP CAPACITOR,0.1-25
C771	87-010-263-080		CAP, ELECT 100-10V
C772	87-010-197-080		CAP, CHIP 0.01 DM
C773	87-010-184-080		CHIP CAPACITOR 3300P(K)
C774	87-010-184-080		CHIP CAPACITOR 3300P(K)
C779	87-010-186-080		C-CAP,S 4700P-50 KB
C780	87-010-186-080		C-CAP,S 4700P-50 KB
C782	87-010-197-080		CAP, CHIP 0.01 DM
C783	87-010-197-080		CAP, CHIP 0.01 DM
C784	87-010-197-080		CAP, CHIP 0.01 DM
C785	87-010-197-080		CAP, CHIP 0.01 DM
C786	87-010-197-080		CAP, CHIP 0.01 DM
C788	87-010-149-080		C-CAP,S 5P-50 CH
C789	87-012-365-080		C-CAP,S 0.027-25VBK
C790	87-012-365-080		C-CAP,S 0.027-25VBK
C791	87-010-196-080		CHIP CAPACITOR,0.1-25
C792	87-010-197-080		CAP, CHIP 0.01 DM
C793	87-010-404-080		CAP, ELECT 4.7-50V
C795	87-010-197-080		CAP, CHIP 0.01 DM
C796	87-010-197-080		CAP, CHIP 0.01 DM
C797	87-010-405-080		CAP, ELECT 10-50V
C798	87-010-197-080		CAP, CHIP 0.01 DM
C799	87-010-407-080		CAP, ELECT 33-50V
C800	87-012-369-080		C-CAP,S 0.047-50F
C801	87-010-403-080		CAP, ELECT 3.3-50V
C802	87-012-369-080		C-CAP,S 0.047-50F
C803	87-010-198-080		CAP, CHIP 0.022
C804	87-010-263-080		CAP, ELECT 100-10V
C807	87-010-400-080		CAP, ELECT 0.47-50V
C808	87-010-401-080		CAP, ELECT 1-50V
C809	87-010-401-080		CAP, ELECT 1-50V
C810	87-010-196-080		CHIP CAPACITOR,0.1-25
C811	87-010-403-080		CAP, ELECT 3.3-50V
C812	87-010-403-080		CAP, ELECT 3.3-50V
C814	87-010-197-080		CAP, CHIP 0.01 DM
C815	87-010-400-080		CAP, ELECT 0.47-50V
C816	87-010-400-080		CAP, ELECT 0.47-50V
C818	87-010-180-080		C-CAP,S 1500P-50 KB
C819	87-010-179-080		CAP,CHIP S B1200P
C820	87-010-179-080		CAP,CHIP S B1200P
C821	87-010-405-080		CAP, ELECT 10-50V
C823	87-012-349-080		C-CAP,S 1000P-50 CH
C824	87-010-405-080		CAP, ELECT 10-50V
C825	87-010-596-080		CAP, S 0.047-16
C831	87-010-406-080		CAP,E 22-50V
C849	87-010-196-080		C-CAP,S 0.1-25 ZF
C869	87-010-197-080		C-CAP,S 0.01-25 KB

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C870	87-018-131-080		CAP,TC U 1000P-50 KB
C871	87-012-156-080		C-CAP,S 220P-50 CH
C872	87-012-156-080		C-CAP,S 220P-50 CH
C873	87-012-140-080		C-CAP,S 470P-50 CH
C874	87-010-405-080		CAP,E 10-50 SME
C875	87-010-196-080		C-CAP,S 0.1-25 ZF
C876	87-010-405-080		CAP,E 10-50 SME
C877	87-010-197-080		C-CAP,S 0.01-25 KB
C878	87-010-316-080		C-CAP,S 33P-50 CH
C879	87-010-314-080		C-CAP, S 22P-50 CH
C940	87-010-197-080		C-CAP, S 0.01-25 KB
C942	87-010-149-080		C-CAP, S 5P-50 CH
C947	87-010-197-080		C-CAP, S 0.01-25 KB
C948	87-012-140-080		C-CAP, S 470P-50 CH
C952	87-010-197-080		C-CAP, S 0.01-25 KB
C957	87-010-311-080		C-CAP, S 12P-50 CH
C958	87-010-197-080		C-CAP, S 0.01-25 KB
C985	87-010-322-080		C-CAP, S 100P-50 CH
C989	87-010-197-080		C-CAP, S 0.01-25 KB
C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C962	87-010-401-080		CAP,E 1-50 SME
C963	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C971	87-010-381-080		CAP, ELECT 330-16V
C972	87-010-404-080		CAP, ELECT 4.7-50V
C973	87-010-197-080		CAP, CHIP 0.01 DM
C974	87-010-197-080		CAP, CHIP 0.01 DM
C979	87-010-322-080		C-CAP,S 100P-50 CH
C981	87-010-260-080		CAP, ELECT 47-25V
C982	87-010-196-080		CHIP CAPACITOR,0.1-25
C983	87-010-197-080		CAP, CHIP 0.01 DM
C984	87-010-197-080		CAP, CHIP 0.01 DM
C987	87-010-197-080		CAP, CHIP 0.01 DM
C991	87-010-312-080		C-CAP,S 15P-50 CH
C992	87-010-312-080		C-CAP,S 15P-50 CH
C993	87-010-178-080		CHIP CAP 1000P
C995	87-010-178-080		CHIP CAP 1000P
C997	87-010-196-080		CHIP CAPACITOR,0.1-25
C998	87-010-260-080		CAP, ELECT 47-25V
C999	87-A11-155-080		CAP,TC U 0.01-16 Z F
CF831	87-008-423-010		FLTR, CF SFE10.7MS3G-A
CF832	82-785-747-010		CF,MS2GHY,R
CN1	87-A60-996-010		CONN,13P V BLK TAC-L13X-A3
CN91	87-A60-619-010		CONN,2P V 2MM JMT
CN92	87-A60-619-010		CONN,2P V 2MM JMT
CN101	87-A60-996-010		CONN,13P V BLK TAC-L13X-A3
CN301	87-A60-620-010		CONN,3P V 2MM JMT
CN351	87-A60-625-010		CONN,8P V 2MM JMT
CN601	87-099-719-010		CONN,30P TYK-B(X)
CN602	87-A60-131-010		CONN,6P V FE
CN605	87-099-568-010		CONN,11P TUC-P11P-B1
CNA1	8A-NF8-653-010		CONN ASSY,9P TID-A(480)
CNA2	8A-NF3-640-110		CONN ASSY,3P (VM) ANF-3
FB161	87-003-223-080		F-BEAD,BL02RN2
FB162	87-003-223-080		F-BEAD,BL02RN2
FB301	87-008-372-080		FILTER, EMI BLOIRNI
FB501	87-008-372-080		FILTER, EMI BLOIRNI
FFC302	88-906-481-110		FF-CABLE,6P 1.25 480MM
FFE831	A8-6ZA-191-130		6ZA-1 FEENM
J102	87-A60-238-010		TERMINAL,SP 4P (MSC)
J103	87-A60-483-010		JACK,DIA6.3 BLK ST W/S KM
J601	87-A60-885-010		JACK,PIN 6P R/W MSC
J832	87-A60-403-010		TERMINAL,ANT PAL 2P HSP-312V05
JW991	87-003-216-080		F-BEAD,-3.6-5 BL01RN1-A62T5
L101	87-A50-610-010		COIL,1UH K(MDEC)
L102	87-A50-610-010		COIL,1UH K(MDEC)
L301	87-A50-049-010		COIL,TRAP 85K(COI)
L302	87-A50-049-010		COIL,TRAP 85K(COI)
L351	87-007-342-010		COIL,OSC 85K BIAS
L801	87-A50-608-010		COIL,FM DET-N(TOK)
L802	87-A91-551-010		FLTR,PCFJZH-450 L(TOK)
L811	87-005-847-080		COIL,2.2UH(CECS)
L821	87-A50-209-010		COIL,1POLE MPX(MIT)
L822	87-A50-209-010		COIL,1POLE MPX(MIT)
L832	87-005-847-080		COIL,2.2UH(CECS)
L861	87-005-847-080		COIL,2.2UH K CECS
L941	87-A50-020-010		COIL,ANT LW (COI) 252KHZ
L942	87-A50-019-010		COIL,OSC LW (COI) 856KHZ
L951	8A-NF8-668-010		COIL,AM PACK 2(TOK)
R117	87-012-142-080		C-CAP,S 0.33-16 ZF
R118	87-012-142-080		C-CAP,S 0.33-16 ZF
R161	87-A00-441-050		RES,270-1/2W J RP
R162	87-A00-441-050		RES,270-1/2W J RP
R163	87-A00-441-050		RES,270-1/2W J RP
R164	87-A00-441-050		RES,270-1/2W J RP
R790	87-010-197-080		CAP, CHIP 0.01 DM
R991	87-010-322-080		C-CAP,S 100P-50 CH
R993	87-010-322-080		C-CAP,S 100P-50 CH
R995	87-010-322-080		C-CAP,S 100P-50 CH
SFR301	87-024-355-080		SFR,33K DIA6 H
SFR302	87-024-355-080		SFR,33K DIA6 H
SFR303	87-024-355-080		SFR,33K DIA6 H
SFR304	87-024-355-080		SFR,33K DIA6 H
SFR305	87-024-356-080		SFR,47K DIA6 H
SFR306	87-024-356-080		SFR,47K DIA6 H
SFR351	87-024-356-080		SFR,47K DIA6 H
SFR352	87-024-356-080		SFR,47K DIA6 H
TC942	87-011-253-080		TRIMMER,CER 30P 4.0X4.5 ECRLA
WH1	87-A90-510-010		HLDR,WIRE 2.5-9P
X861	87-A70-091-010		VIB,XTAL 4.332MHZ CSA-309
X991	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309

DISPLAY C.B

C103	87-010-196-080		CHIP CAPACITOR,0.1-25
C104	87-010-313-080		CAP, CHIP 18P
C105	87-010-322-080		C-CAP,S 100P-50 CH
C106	87-012-145-080		CAP, CHIP S 270P CH
C107	87-012-157-080		C-CAP,S 330P-50 CH
C108	87-015-681-040		E/CAP 10-16
C109	87-010-401-040		CAP,E 1-50 SME
C110	87-010-196-080		CHIP CAPACITOR,0.1-25
C112	87-016-460-080		C-CAP,S 0.22-16 B
C113	87-A10-189-040		CAP,E 220-10
C114	87-010-196-080		CHIP CAPACITOR,0.1-25
C115	87-010-198-080		CAP, CHIP 0.022
C116	87-010-493-040		CAP,E 0.47-50 GAS
C117	87-010-498-040		CAP,E 10-16 GAS
C118	87-010-194-080		CAP, CHIP 0.047
C119	87-A10-797-040		CAP,E 47-35 M 5L SRM
C120	87-015-699-040		CAP,E 10-50 7L
C121	87-015-699-040		CAP,E 10-50 7L
C122	87-010-197-080		CAP, CHIP 0.01 DM
C123	87-010-196-080		CHIP CAPACITOR,0.1-25
C125	87-010-196-080		CHIP CAPACITOR,0.1-25
C128	87-010-178-080		CHIP CAP 1000P
C129	87-010-194-080		CAP, CHIP 0.047
C131	87-A10-189-040		CAP,E 220-10
C132	87-A10-189-040		CAP,E 220-10
C151	87-010-194-080		CAP, CHIP 0.047
C192	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C196	87-010-194-080		CAP, CHIP 0.047
C197	87-010-194-080		CAP, CHIP 0.047
C213	87-A10-189-040		CAP,E 220-10
C301	87-010-318-080		C-CAP,S 47P-50 CH
C303	87-016-460-080		C-CAP,S 0.22-16 B
C304	87-016-460-080		C-CAP,S 0.22-16 B
C305	87-010-196-080		CHIP CAPACITOR,0.1-25
C306	87-010-196-080		CHIP CAPACITOR,0.1-25

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C310	87-010-067-040		CAP,E 0.1-50 5L
C701	87-010-981-040		CAP,E 22-35 5L SRE
C901	87-012-157-080		C-CAP,S 330P-50 CH
C902	87-010-176-080		C-CAP,S 680P-50 SL
C903	87-010-176-080		C-CAP,S 680P-50 SL
C904	87-010-176-080		C-CAP,S 680P-50 SL
C905	87-010-176-080		C-CAP,S 680P-50 SL
C906	87-010-176-080		C-CAP,S 680P-50 SL
C907	87-010-176-080		C-CAP,S 680P-50 SL
C908	87-010-176-080		C-CAP,S 680P-50 SL
C909	87-010-176-080		C-CAP,S 680P-50 SL
C910	87-010-176-080		C-CAP,S 680P-50 SL
C911	87-010-176-080		C-CAP,S 680P-50 SL
C912	87-010-176-080		C-CAP,S 680P-50 SL
C913	87-010-176-080		C-CAP,S 680P-50 SL
C914	87-012-145-080		CAP, CHIP S 270P CH
CN101	87-099-720-010		CONN,30P TYK-B(P)
CN102	87-A60-054-010		CONN,14P V 9604S-14C
CN103	87-099-750-010		CONN,15P V 9604SC
CN601	87-A60-062-010		CONN,05P V 9604S-05C
CN701	87-099-750-010		CONN,15P V 9604SC
FFC102	88-914-481-110		FF-CABLE,14P 1.25 480MM
FFC104	88-915-161-110		FF-CABLE,15P 1.25
FFC601	88-905-081-110		FF-CABLE,5P 1.25
FFC701	88-915-161-110		FF-CABLE,15P 1.25
FL101	8A-NF3-613-010		FL,BJ752GK-ANF3
JW315	87-A90-896-080		F-BEAD, 035600STY7
JW316	87-A90-896-080		F-BEAD, 035600STY7
L101	87-A50-333-010		COIL,OSC 9.43MHZ

CD KEY C.B

CN301	87-A60-079-010		CONN,08P H 9604S-08F
FFC302	88-908-381-110		FF-CABLE,8P 1.25
LED311	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED312	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED313	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED314	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED315	87-A40-380-180		LED,SEL6510C-TP5 GRN
S311	87-A90-095-080		SW,TACT EVQ11G04M
S312	87-A90-095-080		SW,TACT EVQ11G04M
S313	87-A90-095-080		SW,TACT EVQ11G04M
S314	87-A90-095-080		SW,TACT EVQ11G04M
S315	87-A90-095-080		SW,TACT EVQ11G04M
S316	87-A90-095-080		SW,TACT EVQ11G04M
S317	87-A90-095-080		SW,TACT EVQ11G04M

CONTROL C.B

C401	87-010-196-080		CHIP CAPACITOR,0.1-25
C407	87-010-322-080		C-CAP,S 100P-50 CH
C410	87-010-196-080		CHIP CAPACITOR,0.1-25
C417	87-010-322-080		C-CAP,S 100P-50 CH
C423	87-010-196-080		CHIP CAPACITOR,0.1-25
C424	87-010-196-080		CHIP CAPACITOR,0.1-25
C501	87-010-178-080		CHIP CAP 1000P
C502	87-012-156-080		C-CAP,S 220P-50 CH
C531	87-010-196-080		CHIP CAPACITOR,0.1-25
C532	87-010-196-080		CHIP CAPACITOR,0.1-25
CN104	87-099-750-010		CONN,15P V 9604SC
CN302	87-A60-059-010		CONN,08P V 9604S-08C
LED101	87-A40-317-080		LED,SLR-342VCT31 RED
LED421	87-A40-831-010		LED,SELU1E10CXM-LF70 BLUE-DEF
LED422	87-A40-831-010		LED,SELU1E10CXM-LF70 BLUE-DEF
LED440	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED441	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED442	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED443	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED444	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED445	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED446	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED447	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED448	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED449	87-A40-380-180		LED,SEL6510C-TP5 GRN
LED451	87-A40-537-040		LED,SLR-56PT-T31-W
LED452	87-A40-537-040		LED,SLR-56PT-T31-W
LED453	87-A40-537-040		LED,SLR-56PT-T31-W
LED454	87-A40-537-040		LED,SLR-56PT-T31-W
LED455	87-A40-537-040		LED,SLR-56PT-T31-W
LED456	87-A40-537-040		LED,SLR-56PT-T31-W
LED461	87-A40-317-080		LED,SLR-342VCT31 RED
LED462	87-A40-317-080		LED,SLR-342VCT31 RED
LED463	87-A40-317-080		LED,SLR-342VCT31 RED
LED464	87-A40-317-080		LED,SLR-342VCT31 RED
LED465	87-A40-317-080		LED,SLR-342VCT31 RED
LED521	87-A40-678-010		LED,SELU1E10CXM BLUE-DEF
LED522	87-A40-678-010		LED,SELU1E10CXM BLUE-DEF
S201	87-A90-095-080		SW,TACT EVQ11G04M
S202	87-A90-095-080		SW,TACT EVQ11G04M
S203	87-A90-095-080		SW,TACT EVQ11G04M
S204	87-A90-095-080		SW,TACT EVQ11G04M
S205	87-A90-095-080		SW,TACT EVQ11G04M
S206	87-A90-095-080		SW,TACT EVQ11G04M
S207	87-A90-095-080		SW,TACT EVQ11G04M
S208	87-A90-095-080		SW,TACT EVQ11G04M
S211	87-A90-095-080		SW,TACT EVQ11G04M
S214	87-A90-095-080		SW,TACT EVQ11G04M
S216	87-A90-095-080		SW,TACT EVQ11G04M
S217	87-A90-095-080		SW,TACT EVQ11G04M
S221	87-A90-095-080		SW,TACT EVQ11G04M
S222	87-A90-095-080		SW,TACT EVQ11G04M
S223	87-A90-095-080		SW,TACT EVQ11G04M
S224	87-A90-095-080		SW,TACT EVQ11G04M
S225	87-A90-095-080		SW,TACT EVQ11G04M
S228	87-A90-095-080		SW,TACT EVQ11G04M
S229	87-A90-095-080		SW,TACT EVQ11G04M
S230	87-A90-095-080		SW,TACT EVQ11G04M
S231	87-A90-095-080		SW,TACT EVQ11G04M
S232	87-A90-095-080		SW,TACT EVQ11G04M
S234	87-A90-095-080		SW,TACT EVQ11G04M
S241	87-A90-095-080		SW,TACT EVQ11G04M
S242	87-A90-095-080		SW,TACT EVQ11G04M
S243	87-A90-095-080		SW,TACT EVQ11G04M
S244	87-A90-095-080		SW,TACT EVQ11G04M
S245	87-A90-095-080		SW,TACT EVQ11G04M
S246	87-A90-095-080		SW,TACT EVQ11G04M
S247	87-A90-095-080		SW,TACT EVQ11G04M
S248	87-A90-095-080		SW,TACT EVQ11G04M
S249	87-A90-095-080		SW,TACT EVQ11G04M
S250	87-A90-095-080		SW,TACT EVQ11G04M
S251	87-A90-095-080		SW,TACT EVQ11G04M
S252	87-A90-095-080		SW,TACT EVQ11G04M
S253	87-A90-095-080		SW,TACT EVQ11G04M
SW501	87-A91-739-010		SW,RTRY EC12E12404-25MM RT

VOLUME C.B

C161	87-010-178-080		CHIP CAP 1000P
C162	87-012-156-080		C-CAP,S 220P-50 CH
S511	87-A90-095-080		SW,TACT EVQ11G04M
S512	87-A90-095-080		SW,TACT EVQ11G04M
S513	87-A90-095-080		SW,TACT EVQ11G04M
S514	87-A90-095-080		SW,TACT EVQ11G04M
S515	87-A90-095-080		SW,TACT EVQ11G04M
SW101	87-A91-740-010		SW,RTRY EC12E24308-30MM

MIC C.B

C601	87-010-196-080		CHIP CAPACITOR,0.1-25
C602	87-010-186-080		CAP,CHIP 4700P

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C603	87-010-112-040		CAP,E 100-16
C604	87-010-405-040		CAP,E 10-50
C605	87-010-546-040		CAP,E 0.33-50
C606	87-010-320-080		CHIP CAP 68P
C608	87-012-157-080		C-CAP,S 330P-50 CH
C621	87-010-178-080		CHIP CAP 1000P
CN602	87-A60-082-010		CONN,05P H 9604S-05F
J601	87-A61-242-010		JACK,6.3 BLK MONO W/SW V KM
J602	87-A61-242-010		JACK,6.3 BLK MONO W/SW V KM
L601	87-003-098-080		COIL,2.2UH

AMP C.B

C101	87-010-188-080		CAP,CHIP 6800P
C102	87-010-188-080		CAP,CHIP 6800P
C103	87-010-405-080		CAP, ELECT 10-50V
C104	87-010-405-080		CAP, ELECT 10-50V
C107	87-010-404-080		CAP, ELECT 4.7-50V
C108	87-010-404-080		CAP, ELECT 4.7-50V
C111	87-010-322-080		C-CAP,S 100P-50 CH
C112	87-010-322-080		C-CAP,S 100P-50 CH
C113	87-A10-812-080		C-CAP,S 220P-200 J CH
C114	87-A10-812-080		C-CAP,S 220P-200 J CH
C119	87-010-197-080		CAP, CHIP 0.01 DM
C120	87-010-197-080		CAP, CHIP 0.01 DM
C121	87-010-260-080		CAP, ELECT 47-25V
C122	87-010-260-080		CAP, ELECT 47-25V
C123	87-010-190-080		C-CAP,S 0.01-50 ZF
C173	87-010-186-080		CAP,CHIP 4700P
C174	87-010-186-080		CAP,CHIP 4700P
C205	87-010-187-080		CAP,CHIP S5600P
C206	87-010-187-080		CAP,CHIP S5600P
C207	87-010-403-080		CAP, ELECT 3.3-50V
C208	87-010-403-080		CAP, ELECT 3.3-50V
C209	87-010-184-080		CHIP CAPACITOR 3300P(K)
C210	87-010-184-080		CHIP CAPACITOR 3300P(K)
C211	87-010-401-080		CAP, ELECT 1-50V
C212	87-010-401-080		CAP, ELECT 1-50V
C215	87-012-156-080		C-CAP,S 220P-50 CH
C216	87-012-156-080		C-CAP,S 220P-50 CH
C217	87-010-260-080		CAP, ELECT 47-25V
C218	87-010-260-080		CAP, ELECT 47-25V
C221	87-016-100-080		CAP, ELECT 10-50 M BP SME
C222	87-016-100-080		CAP, ELECT 10-50 M BP SME
C223	87-010-197-080		CAP, CHIP 0.01 DM
C224	87-010-197-080		CAP, CHIP 0.01 DM
C249	87-012-368-080		C-CAP,S 0.1-50 F
C251	87-010-993-080		C-CAP,S 0.056-25 B
C252	87-010-196-080		CHIP CAPACITOR,0.1-25
C253	87-010-196-080		CHIP CAPACITOR,0.1-25
C254	87-010-993-080		C-CAP,S 0.056-25 B
C255	87-010-190-080		S CHIP F 0.01
C256	87-010-190-080		S CHIP F 0.01
C265	87-010-260-080		CAP,E 47-25V
C402	87-010-196-080		CHIP CAPACITOR,0.1-25
C413	87-A10-119-080		CAP,E 10-100 REA
C414	87-A10-119-080		CAP,E 10-100 REA
CNA101	8A-NF8-652-010		CONN ASSY,7P TID-A(480)
CNA103	8A-NF8-656-010		CONN ASSY,5P TID-A(400)
CON101	87-A61-011-010		CONN,13P H BLK TAC-L13P-A3
CON102	87-A61-011-010		CONN,13P H BLK TAC-L13P-A3
FB101	87-A90-896-080		F-BEAD, 035600STY7
FB102	87-A90-896-080		F-BEAD, 035600STY7
J201	87-A61-148-010		JACK,PIN 4P R/W BLUE
JW124	87-A90-896-080		F-BEAD, 035600STY7
JW138	87-A90-896-080		F-BEAD, 035600STY7
JW944	87-A90-896-080		F-BEAD, 035600STY7
L251	87-A50-610-010		COIL,1UH K(MDEC)
L252	87-A50-610-010		COIL,1UH K(MDEC)
R161	87-A00-418-010		RES,M/F 0.15-3W J
R162	87-A00-418-010		RES,M/F 0.15-3W J
R165	87-A00-418-010		RES,M/F 0.15-3W J
R166	87-A00-418-010		RES,M/F 0.15-3W J
R231	87-A00-258-080		RES,M/F 0.22-1W J
R232	87-A00-258-080		RES,M/F 0.22-1W J
R243	87-A00-258-080		RES,M/F 0.22-1W J
R244	87-A00-258-080		RES,M/F 0.22-1W J
TH101	87-A91-042-080		C-THMS,100K 55001
TH102	87-A91-042-080		C-THMS,100K 55001
WH101	87-A90-460-010		HLDR,WIRE 2.5-7P

PT C.B

C1	87-010-387-080		CAP,E 470-25 SME
C8	87-A11-148-080		CAP,TC U 0.1-50 Z F
C9	87-A11-148-080		CAP,TC U 0.1-50 Z F
C10	87-A11-148-080		CAP,TC U 0.1-50 Z F
C11	87-A11-148-080		CAP,TC U 0.1-50 Z F
C12	87-010-917-000		CAP,E 3300-50 M SMG
C13	87-010-917-000		CAP,E 3300-50 M SMG
C16	87-010-403-040		CAP,E 3.3-50 SME
C18	87-A11-148-080		CAP,TC U 0.1-50 Z F
C19	87-A11-148-080		CAP,TC U 0.1-50 Z F
C20	87-A11-148-080		CAP,TC U 0.1-50 Z F
C21	87-A11-148-080		CAP,TC U 0.1-50 Z F
C22	87-A10-231-090		CAP,E 3300-80
C23	87-A10-231-090		CAP,E 3300-80
C27	87-A11-148-080		CAP,TC U 0.1-50 Z F
C28	87-A11-148-080		CAP,TC U 0.1-50 Z F
C29	87-A11-148-080		CAP,TC U 0.1-50 Z F
C30	87-A11-148-080		CAP,TC U 0.1-50 Z F
C31	87-A11-148-080		CAP,TC U 0.1-50 Z F
C32	87-A11-148-080		CAP,TC U 0.1-50 Z F
C33	87-A11-148-080		CAP,TC U 0.1-50 Z F
C34	87-A11-148-080		CAP,TC U 0.1-50 Z F
C35	87-A11-148-080		CAP,TC U 0.1-50 Z F
C36	87-A11-148-080		CAP,TC U 0.1-50 Z F
C37	87-A11-148-080		CAP,TC U 0.1-50 Z F
C38	87-A11-148-080		CAP,TC U 0.1-50 Z F
⚠ CN1	87-A61-110-010		CONN,9P V TID-A
⚠ CN2	87-A61-108-010		CONN,5P V TID-A
⚠ F101	87-035-459-010		FUSE,5A 250V
⚠ F102	87-035-459-010		FUSE,5A 250V
⚠ FB101	87-A90-562-010		F-BEAD,9.5-17.5.5-28.5 BRH
⚠ FC1	87-033-213-080		FUSE CLAMP,PFC5000
⚠ FC2	87-033-213-080		FUSE CLAMP,PFC5000
⚠ PR1	87-026-682-080		PROTECTOR,10A 60V491
⚠ PR2	87-026-682-080		PROTECTOR,10A 491 SERIES 60V
⚠ PR3	87-A90-195-080		PROTECTOR,7A 125V 49
⚠ PR4	87-A90-195-080		PROTECTOR,7A 125V 49
⚠ PR5	87-026-682-080		PROTECTOR,10A 491 SERIES 60V
⚠ PR8	87-026-682-080		PROTECTOR,10A 491 SERIES 60V
⚠ PT2	8A-NF8-622-010		PT,SUB ANF-8 (E)
⚠ PT101	8A-NF3-602-010		PT,LH EI105-60 ANF-3
⚠ RY1	87-A90-976-010		RELAY,AC 12V SDT-S-112LMR
⚠ T1	87-A60-317-010		TERMINAL, 1P MSC
⚠ T2	87-A60-317-010		TERMINAL, 1P MSC

VM C.B

CNA3	87-049-919-010		CONN,3P EH V WHT

GEQ C.B

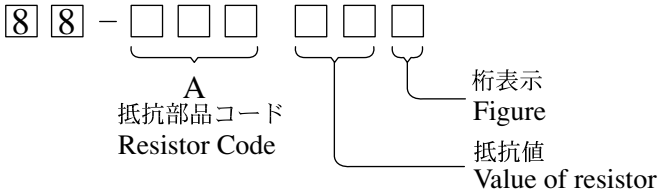
C201	87-010-402-080		CAP, ELECT 2.2-50V
C202	87-010-402-080		CAP, ELECT 2.2-50V
C205	87-010-404-080		CAP, ELECT 4.7-50V
C207	87-016-669-080		C-CAP,S 0.1-25 K B
C208	87-016-669-080		C-CAP,S 0.1-25 K B
C209	87-016-460-080		C-CAP,S 0.22-16 B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C210	87-016-460-080		C-CAP,S 0.22-16 B
C211	87-012-365-080		C-CAP,S 0.027-25VBK
C212	87-012-365-080		C-CAP,S 0.027-25VBK
C213	87-010-956-080		CHIP-CAP,S 0.068-25B
C214	87-010-956-080		CHIP-CAP,S 0.068-25B
C215	87-010-197-080		CAP, CHIP 0.01 DM
C216	87-010-197-080		CAP, CHIP 0.01 DM
C217	87-010-198-080		CAP, CHIP 0.022
C218	87-010-198-080		CAP, CHIP 0.022
C219	87-010-183-080		C-CAP,S 2700P-50 B
C220	87-010-183-080		C-CAP,S 2700P-50 B
C221	87-010-188-080		CAP,CHIP 6800P
C222	87-010-188-080		CAP,CHIP 6800P
C223	87-010-178-080		CHIP CAP 1000P
C224	87-010-178-080		CHIP CAP 1000P
C225	87-010-182-080		C-CAP,S 2200P-50 B
C226	87-010-182-080		C-CAP,S 2200P-50 B
C227	87-010-112-080		CAP, ELECT 100-16V
C228	87-010-196-080		CHIP CAPACITOR,0.1-25
C229	87-010-322-080		C-CAP,S 100P-50 CH

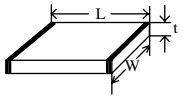
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C230	87-010-322-080		C-CAP,S 100P-50 CH
C231	87-010-322-080		C-CAP,S 100P-50 CH
CN201	87-A60-546-010		CONN,11P H GRY TUC-P11X-C1
DECK C.B			
CN502	87-099-756-010		CONN,15P 9604S F
SFR1	87-024-581-010		SFR,3.3K DIA 6H
SOL1	82-ZM1-618-410		SOL ASSY,27
SOL2	82-ZM1-618-410		SOL ASSY,27
SW1	87-A90-248-010		SW,MICRO ESE11SH2CXQ
SW2	87-A90-248-010		SW,MICRO ESE11SH2CXQ
SW3	87-A90-248-010		SW,MICRO ESE11SH2CXQ
SW4	87-036-110-010		SW,MICRO SPPB62
HEAD-1 C.B			
HEAD-2 C.B			

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

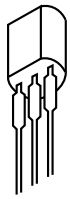
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION

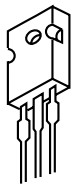


KTA1266GR
KTC3198GR
KTC3199GR

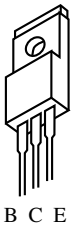
CSA952K
CD1585BC
CSC4115BC

CC5551

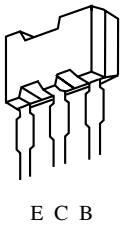
DTC114ES
2SA933S



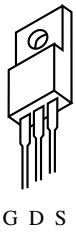
2SB1436(R)



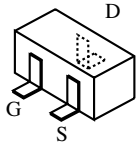
2SB1370E
FN1016
FP1016



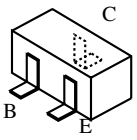
2SB1237Q

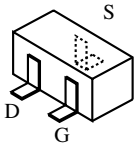


2SK3053



2SK2158
2SJ461-T1



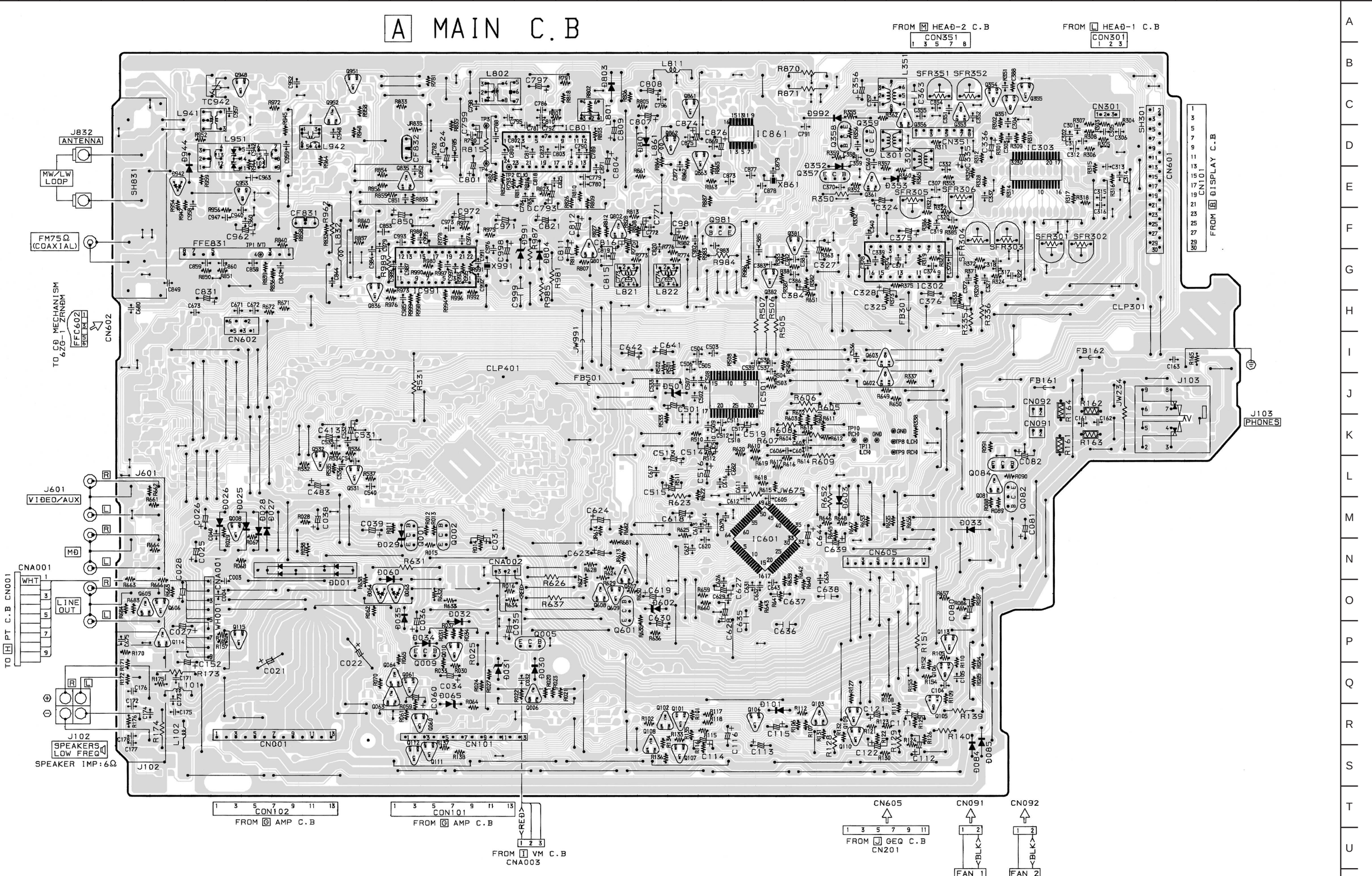


2SA1235F
2SC2714O
2SC3052F
CMBT5551
CMBT5401
CSD1306E

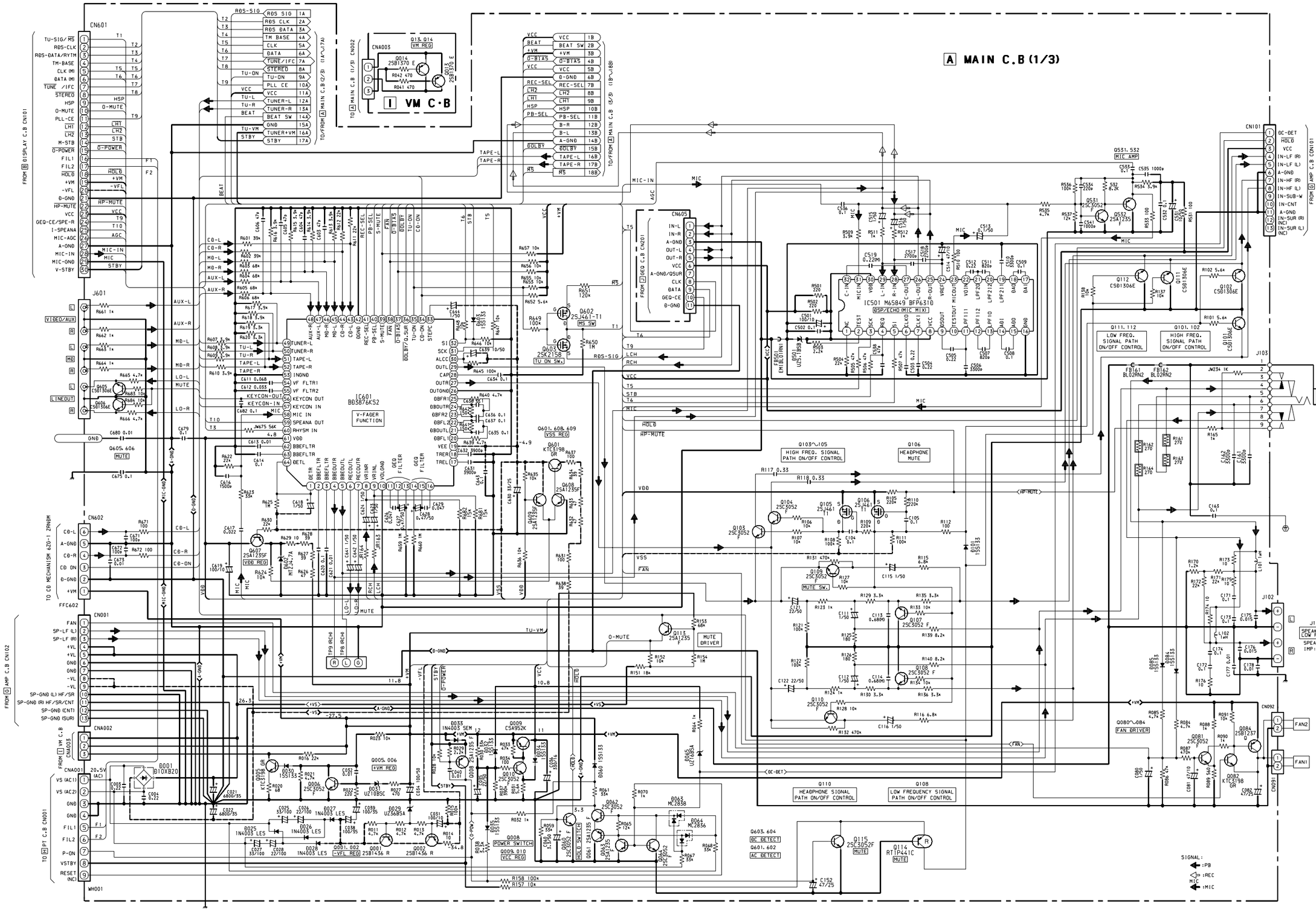
DTA143EKA
KRA104S
RT1N141C
RT1P141C
RT1P144C
RT1P441C

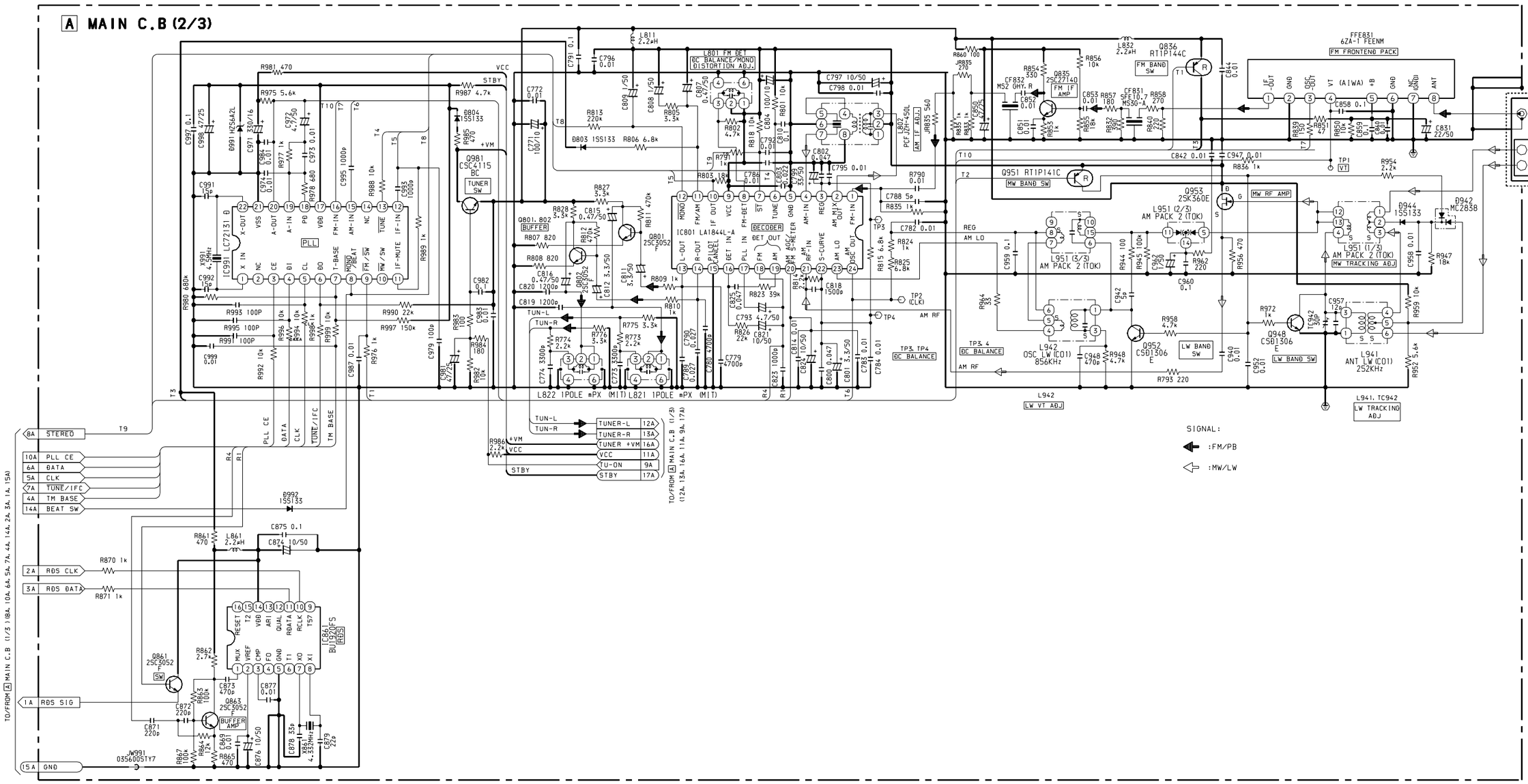
2SK360E

A MAIN C.B

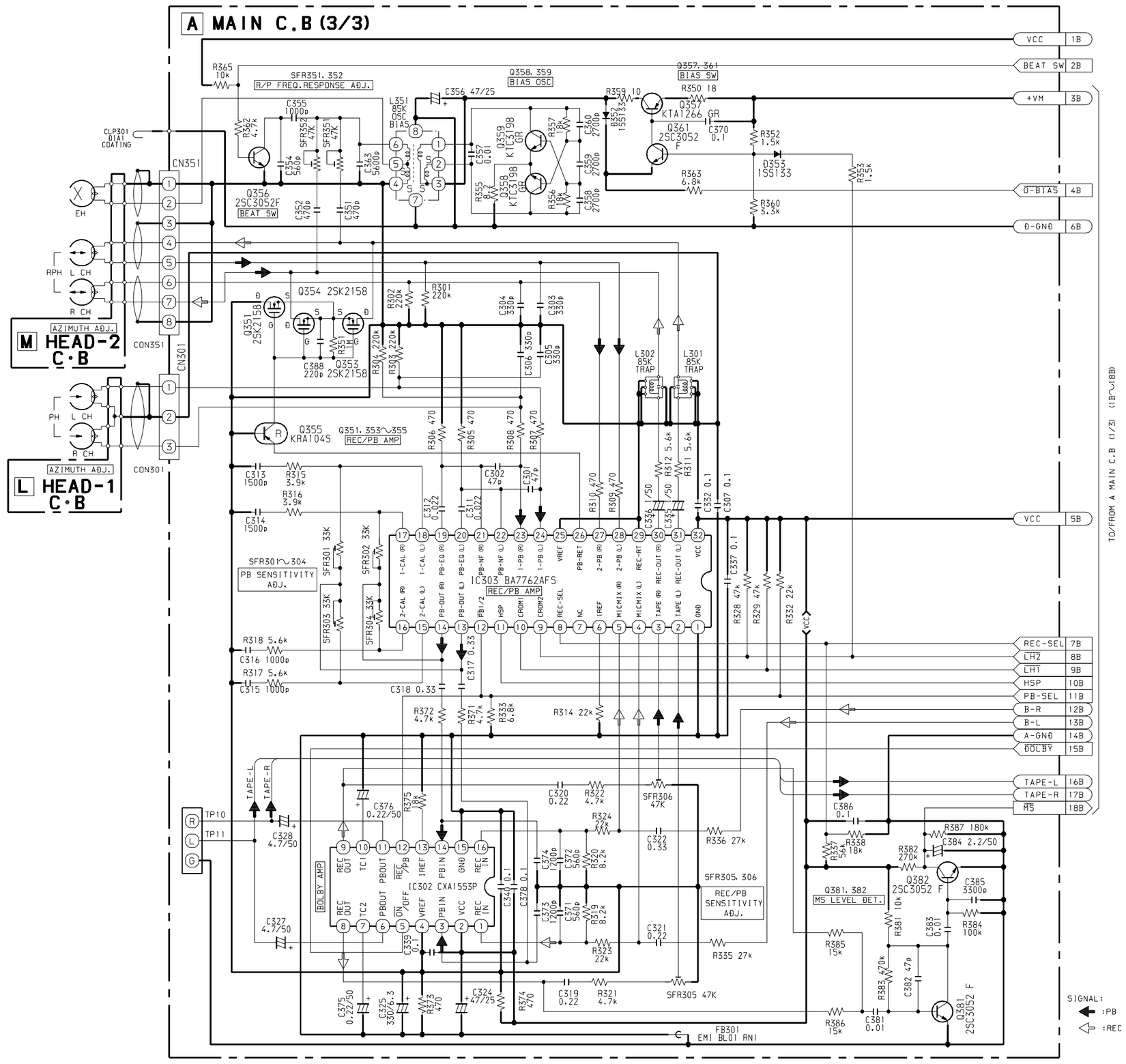

FROM M HEAD-2 C.B
CON351
FROM L HEAD-1 C.B
CON301
FROM B DISPLAY C.B
CN101
CN601
J832
ANTENNA
MW/LW LOOP
FM75Ω (COAXIAL)
TO CB MECHANISM 6ZG-1 ZRNDM
FFC602
CN602
J601
VIDEO/AUX
MD
LINE OUT
CNA001
TO H PT C.B CN001
J102
SPEAKERS LOW FREQ
SPEAKER IMP:6Ω
J103
PHONES
CLP301
CLP401
SFR351 SFR352
SFR305 SFR306
SFR304 SFR303
SFR301 SFR302
IC861
IC303
IC302
IC601
CN001
CN101
CN102
FROM G AMP C.B
CON102
CON101
FROM G AMP C.B
FROM I VM C.B
CNA003
CN605
FROM J GEQ C.B
CN201
CN091
CN092
FAN 1
FAN 2
BLK
RED

SCHEMATIC DIAGRAM – 1 (MAIN 1/3 / VM)

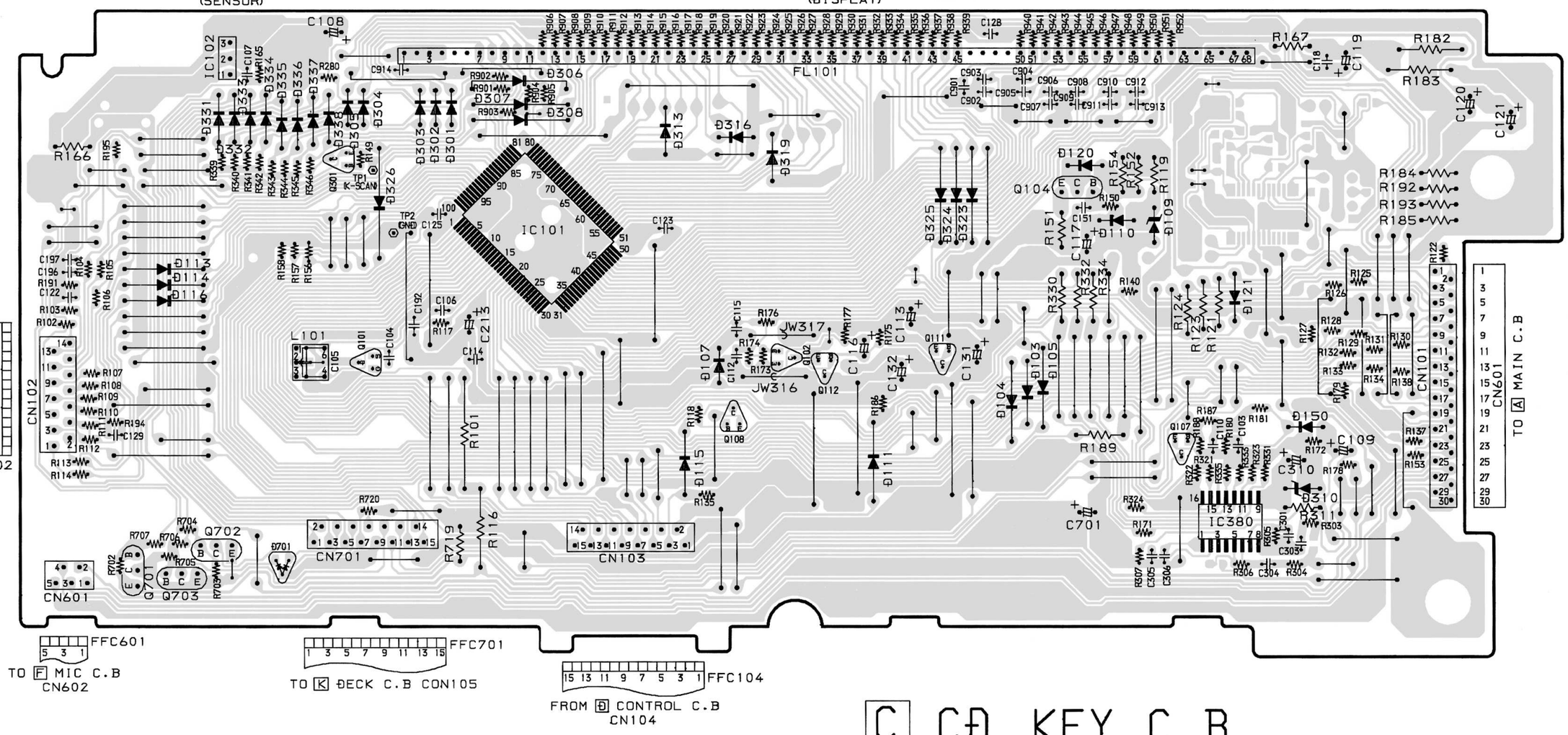



A MAIN C.B (2/3)
IC801 LA1844L-A
IC721 X-OUT A-OUT A-IN PD VDD FM-IN AM-IN NC TUNE IF-IN
PLL
IC991 X IN NC CE DI CL DO T-BASE MONO /BEAT FM/SW MW/SW IF-MUTE
L822 1POLE mPX (MIT) L821 1POLE mPX (MIT)
L801 FM DET DC BALANCE/MONO DISTORTION ADJ.
Q981 CSC4115 BC TUNER SW
Q801, 802 BUFFER
DECODER
DET OUT
Q951 RT1P141C MW BAND SW
Q953 2SK360E MW RF AMP
Q836 RT1P144C FM BAND SW
Q835 2SC2714O FM IF AMP
FFE831 6ZA-1 FEENM FM FRONTEND PACK
L951 (2/3) AM PACK 2 (TOK)
L951 (3/3) AM PACK 2 (TOK)
L951 (1/3) AM PACK 2 (TOK) MW TRACKING ADJ
L942 OSC LW (CO1) 856KHz
L941 ANT LW (CO1) 252KHz
L941, TC942 LW TRACKING ADJ
L942 LW VT ADJ
Q952 CSD1306 E LW BAND SW
Q948 CSD1306 E
Q942 MC2838
D942 1SS133
D804 1SS133
D992 1SS133
D991 HZ56A2L
TP1 VT
TP2 (CLK)
TP3 TP4 DC BALANCE
TP3, 4 DC BALANCE
AM RF
REG
AM LO
J832 ANTENNA FM 75Ω (COAXIAL)
(SH701)
MW/LW LOOP
SIGNAL:
:FM/PB
:MW/LW
TO/FROM A MAIN C.B (1/3) (10A, 6A, 5A, 7A, 4A, 14A, 2A, 3A, 1A, 15A)
8A STEREO
10A PLL CE
6A DATA
5A CLK
7A TUNE/IFC
4A TM BASE
14A BEAT SW
2A RDS CLK
3A RDS DATA
1A RDS SIG
15A GND
TUNER-L 12A
TUNER-R 13A
TUNER +VM 16A
VCC 11A
TU-ON 9A
STBY 17A
TO/FROM A MAIN C.B (1/3) (12A, 13A, 16A, 11A, 9A, 17A)
IC861 BU1924KFS RDS
Q861 2SC3052 F SW
Q863 2SC3052 F BUFFER AMP
JW991 035600STY7
X861 4.332MHz

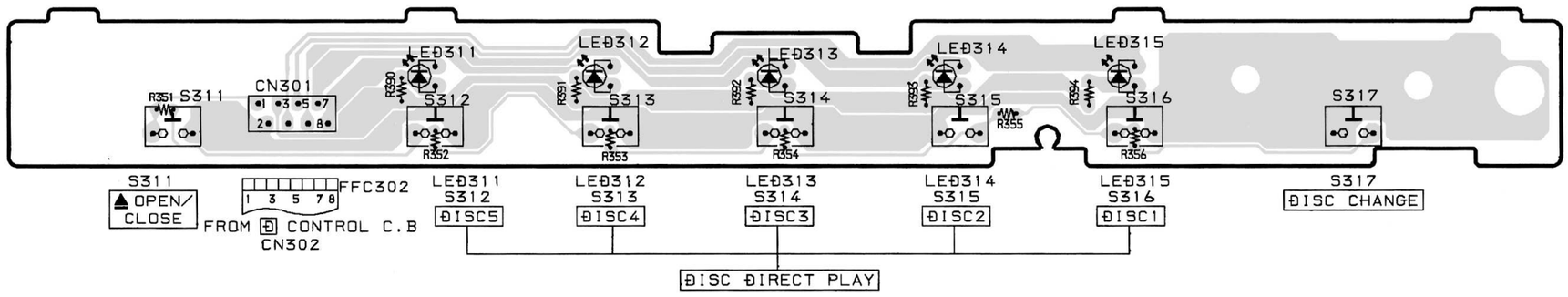
SCHEMATIC DIAGRAM – 3 (MAIN 3/3 / HEAD-1 / HEAD-2)



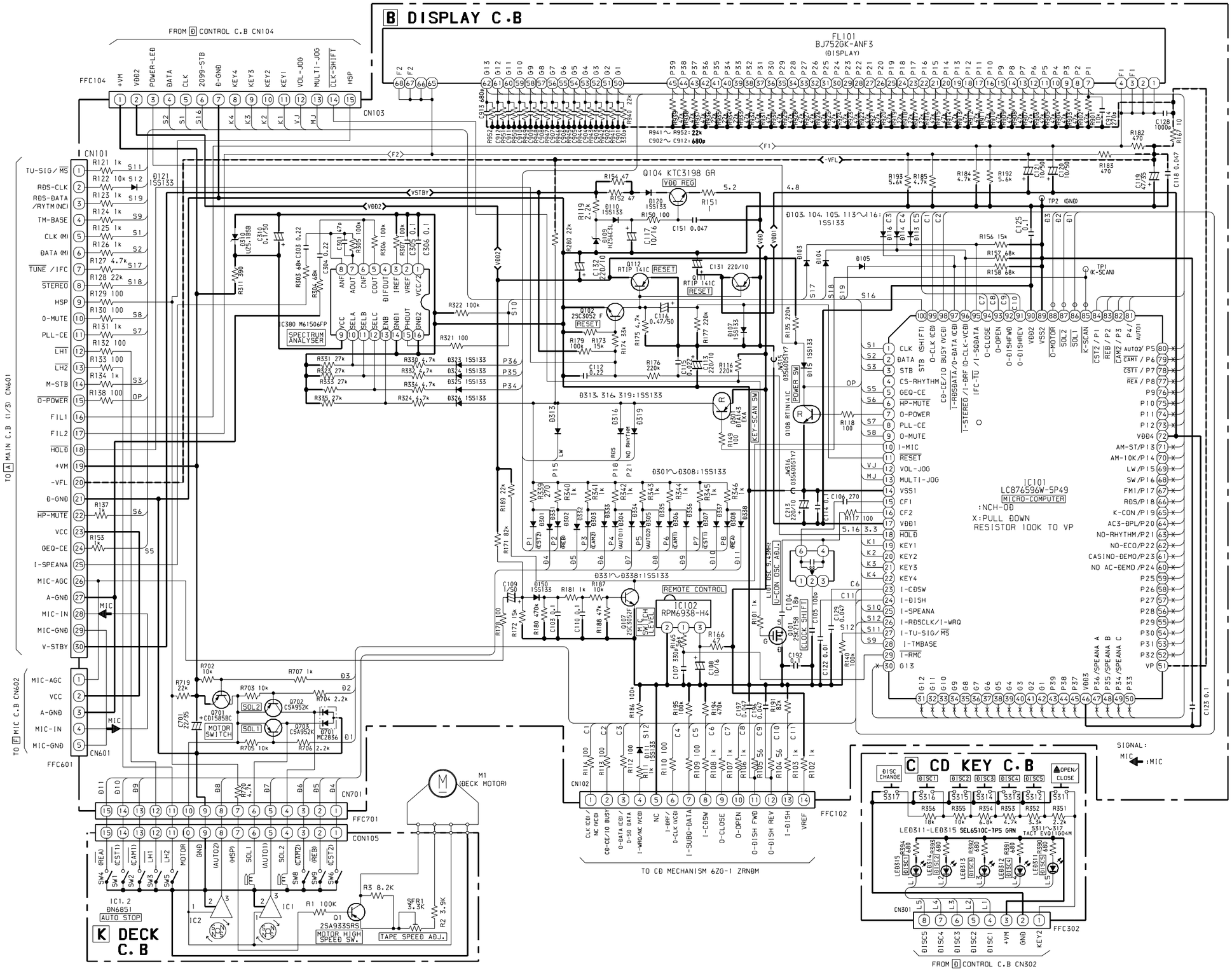
B ĐISPLAY C.B

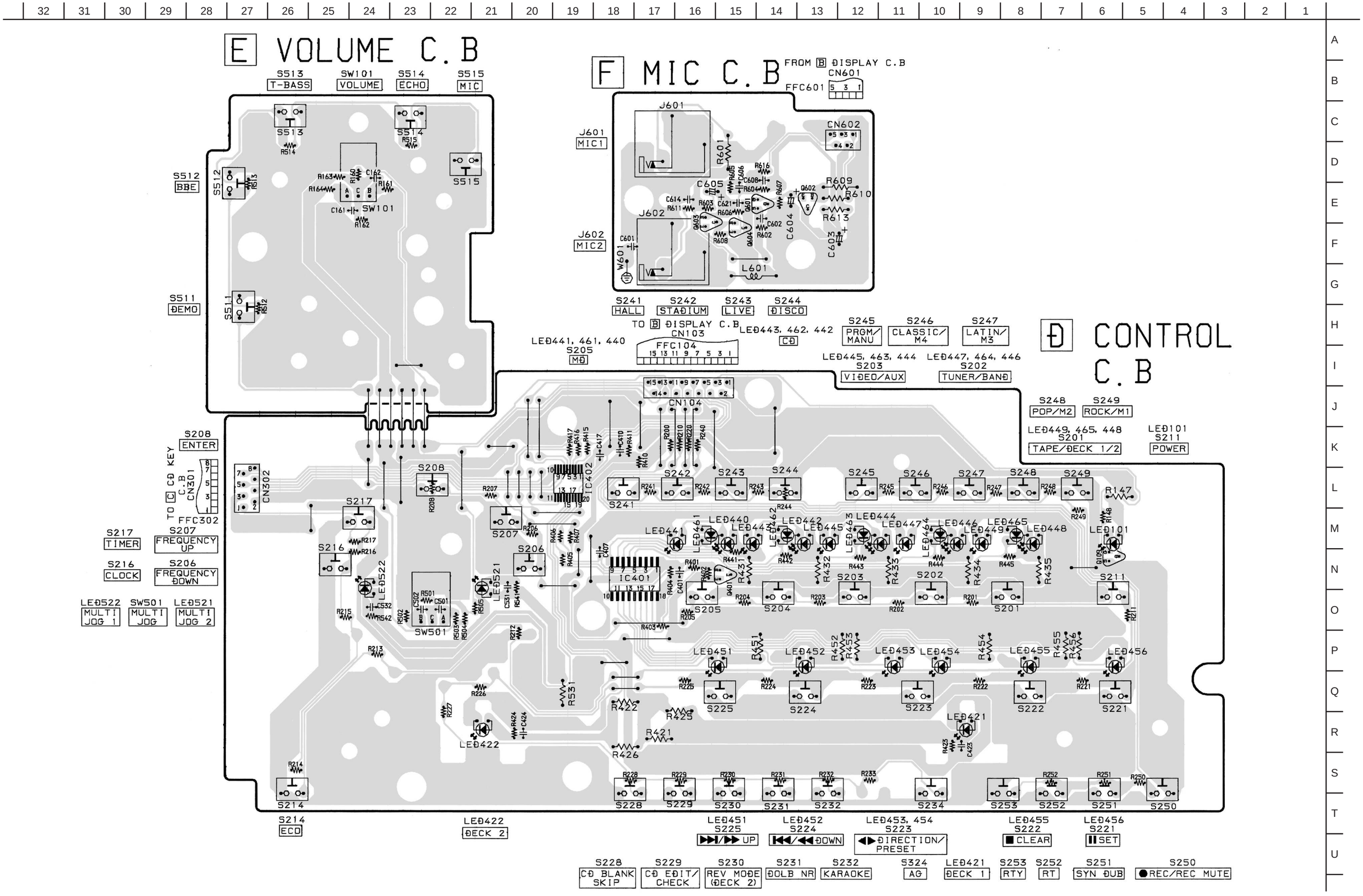


C CĐ KEY C.B

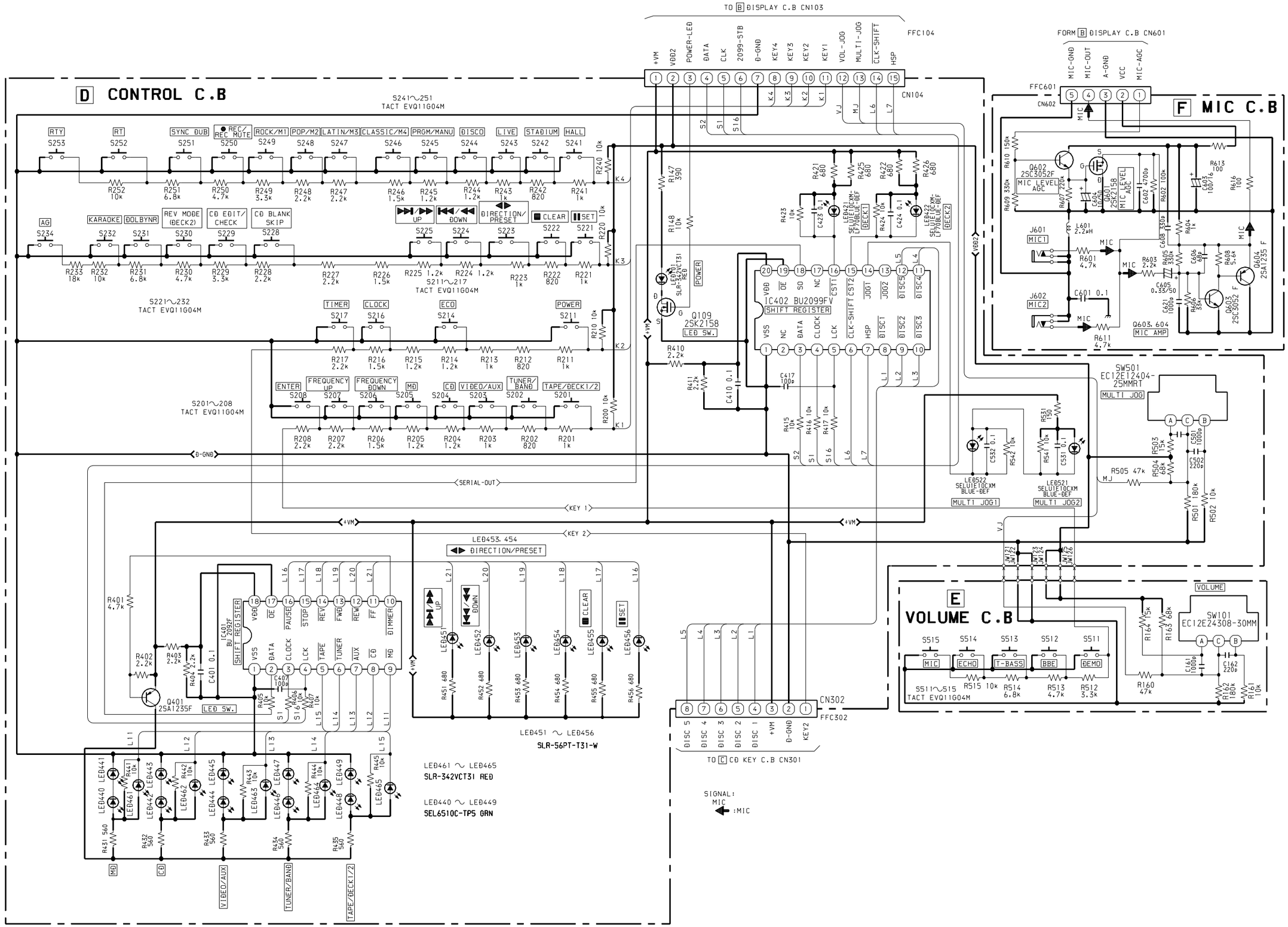


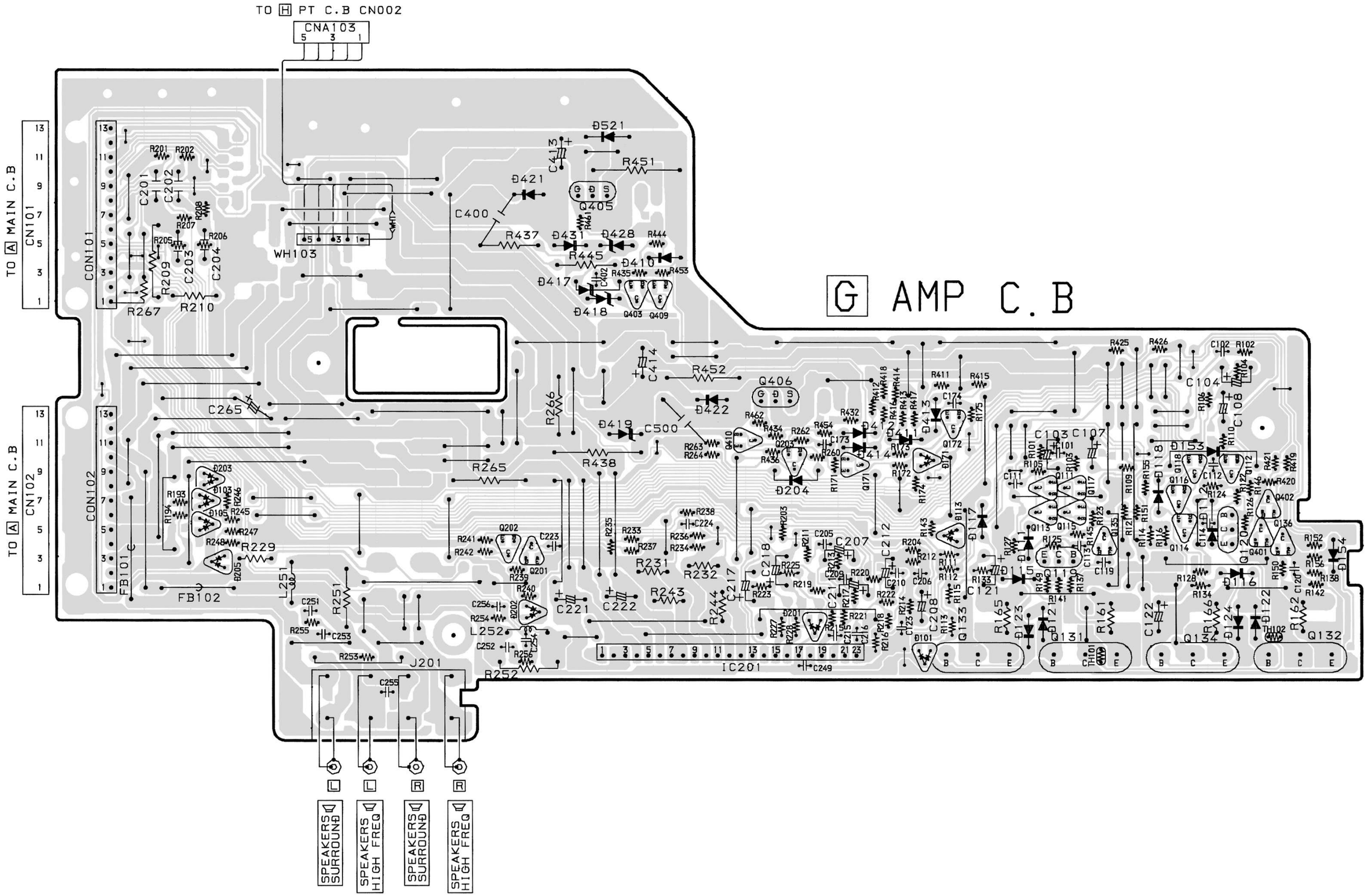
SCHEMATIC DIAGRAM – 4 (DISPLAY / CD KEY / DECK)



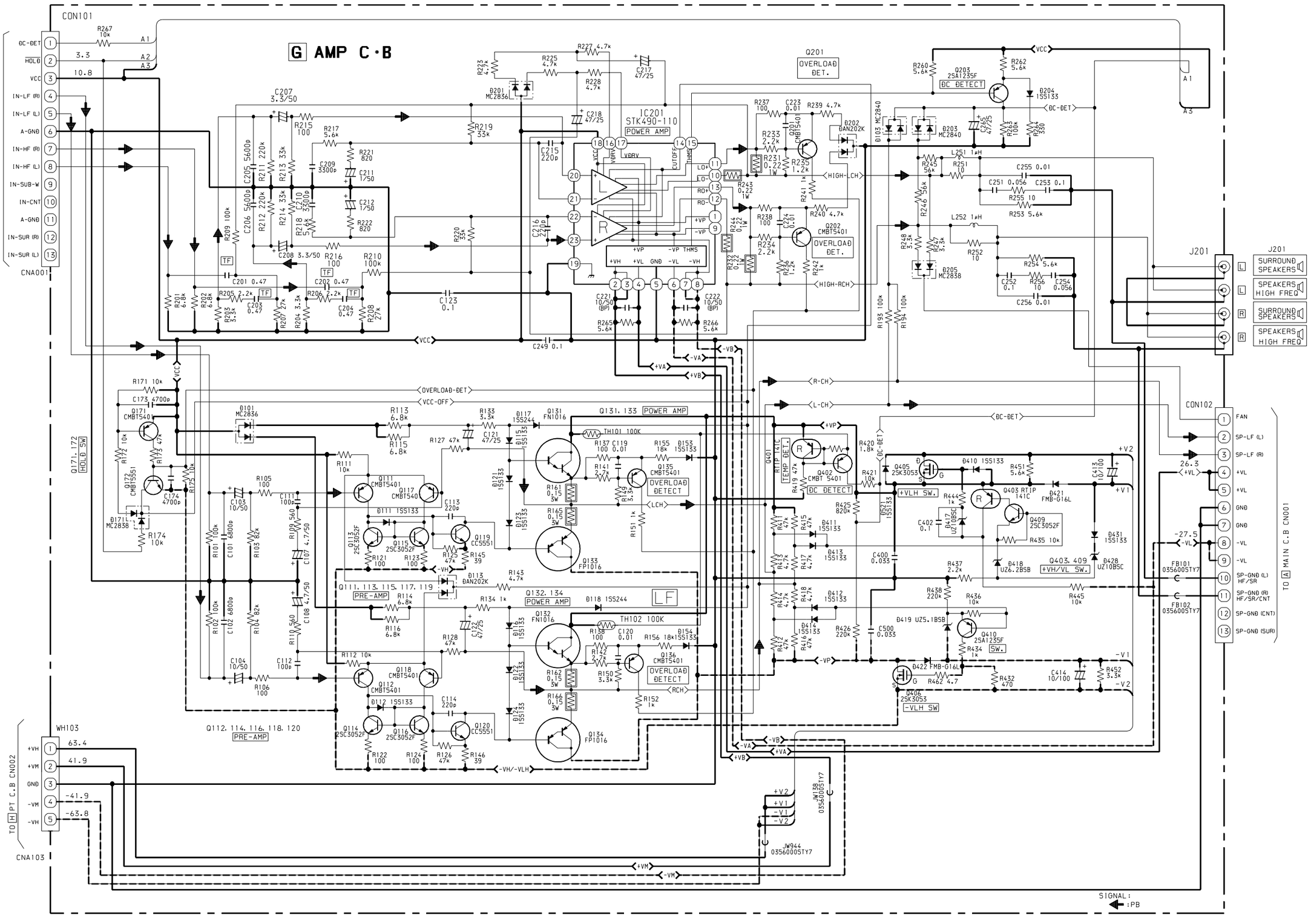

E VOLUME C.B
S513 T-BASS
SW101 VOLUME
S514 ECHO
S515 MIC
S512 BBE
S511 ĐEMO
F MIC C.B
FROM B ĐISPLAY C.B
CN601
FFC601
J601 MIC1
J602 MIC2
CN602
L601
S241 HALL
S242 STAĐIUM
S243 LIVE
S244 ĐISCO
TO B ĐISPLAY C.B
CN103
FFC104
LEĐ441, 461, 440
S205 MĐ
LEĐ443, 462, 442
CĐ
S245 PRGM/MANU
S246 CLASSIC/M4
S247 LATIN/M3
LEĐ445, 463, 444
S203 VIĐEO/AUX
LEĐ447, 464, 446
S202 TUNER/BANĐ
Đ CONTROL C.B
S248 POP/M2
S249 ROCK/M1
LEĐ449, 465, 448
S201 TAPE/ĐECK 1/2
LEĐ101
S211 POWER
CN104
S208 ENTER
TO C CĐ KEY C.B CN301
FFC302
CN302
IC402
IC401
S217 TIMER
S207 FREQUENCY UP
S216 CLOCK
S206 FREQUENCY ĐOWN
LEĐ522 MULTI JOG 1
SW501 MULTI JOG
LEĐ521 MULTI JOG 2
S214 ECO
LEĐ422 ĐECK 2
LEĐ451 S225 ▶▶|/▶▶ UP
LEĐ452 S224 |◀◀/◀◀ ĐOWN
LEĐ453, 454 S223 ◀▶ ĐIRECTION/PRESET
LEĐ455 S222 ■ CLEAR
LEĐ456 S221 ❚❚ SET
S228 CĐ BLANK SKIP
S229 CĐ EĐIT/CHECK
S230 REV MOĐE (ĐECK 2)
S231 ĐOLB NR
S232 KARAOKE
S324 AG
LEĐ421 ĐECK 1
S253 RTY
S252 RT
S251 SYN ĐUB
S250 ● REC/REC MUTE

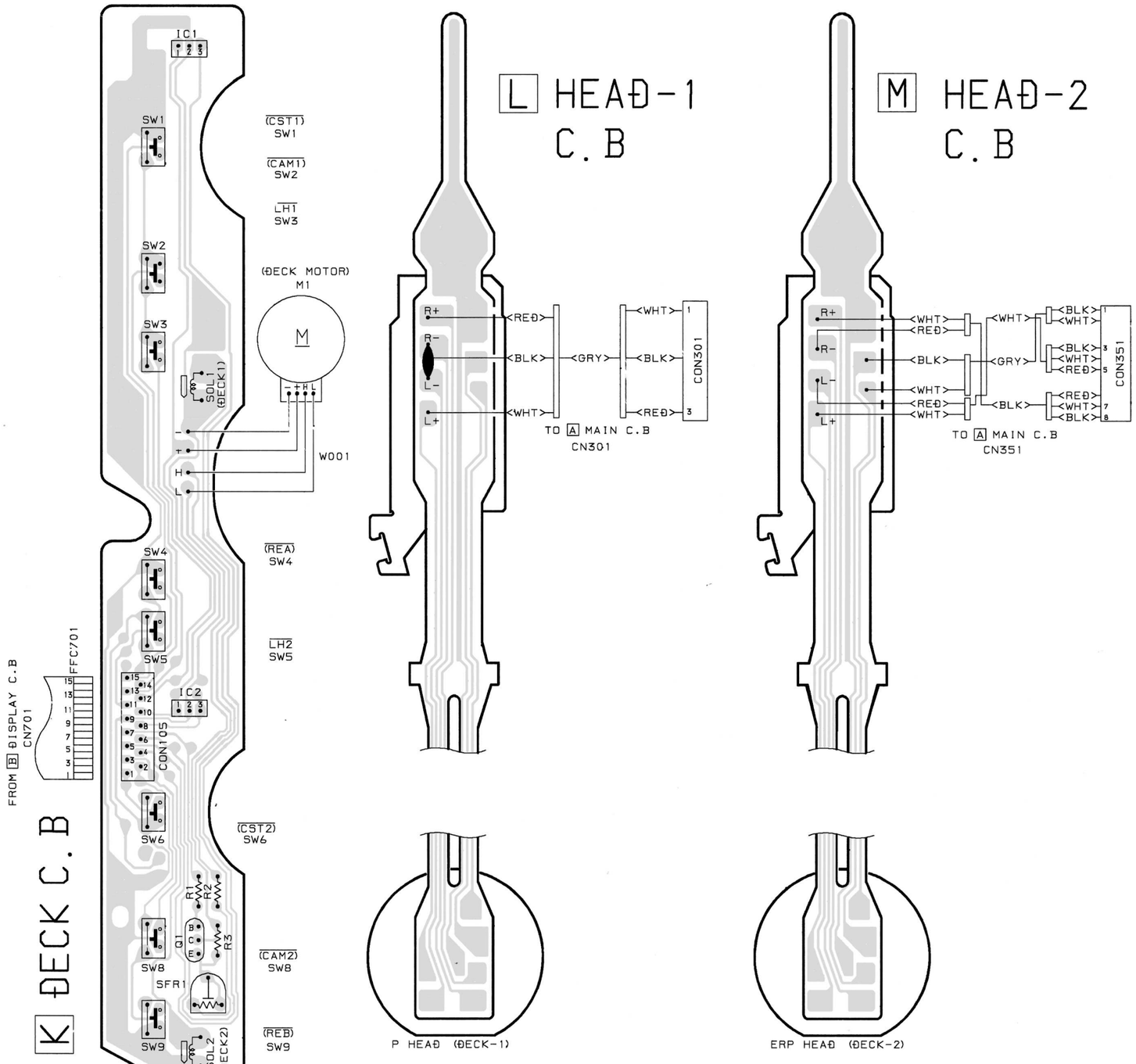
SCHEMATIC DIAGRAM – 5 (CONTROL / VOLUME / MIC)

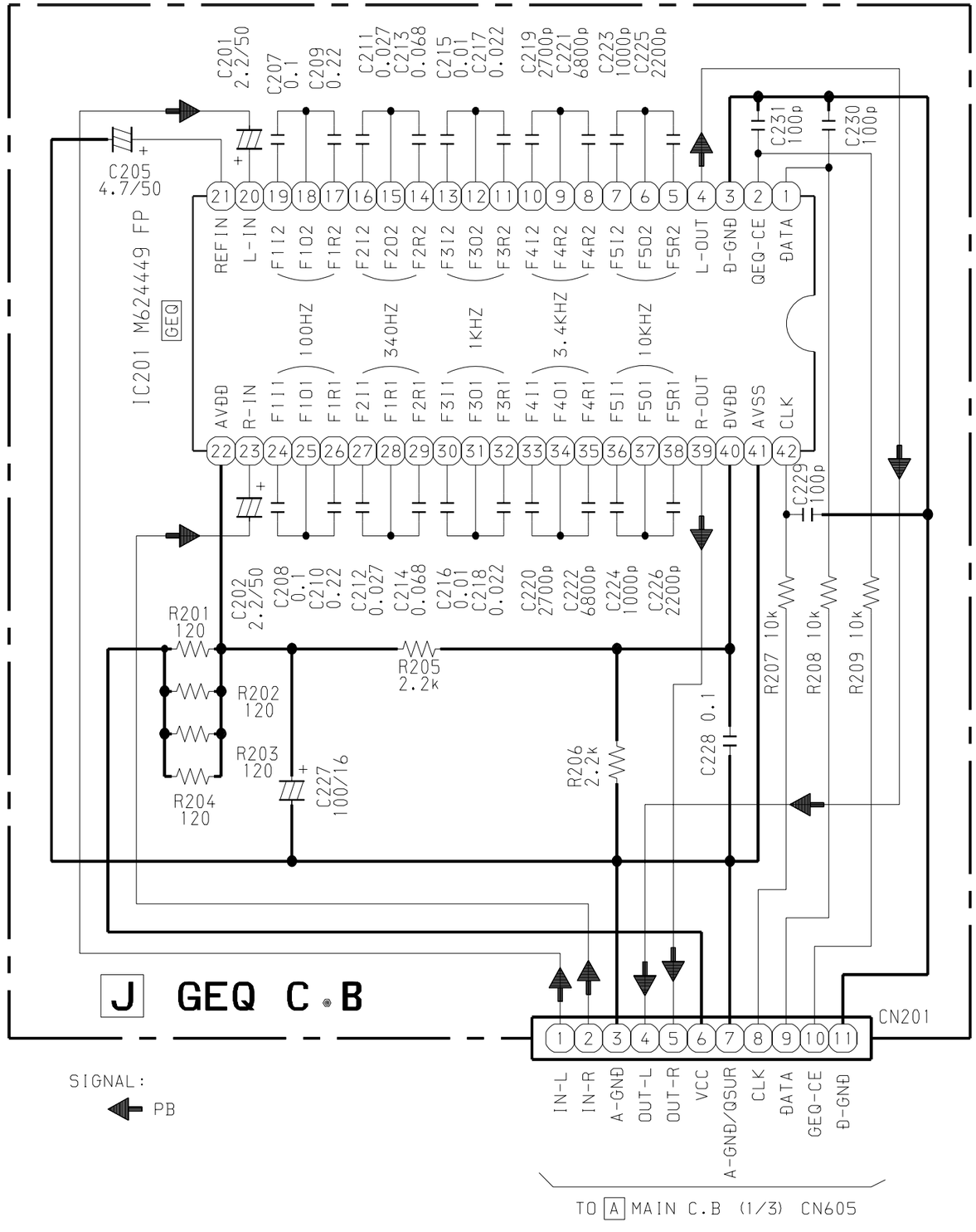



G AMP C.B
TO H PT C.B CN002
CNA103
TO A MAIN C.B
CN101
CON101
CN102
CON102
WH103
IC201
J201
FB101
FB102
SPEAKERS SURROUND
SPEAKERS HIGH FREQ
SPEAKERS SURROUND
SPEAKERS HIGH FREQ

SCHEMATIC DIAGRAM – 6 (AMP)



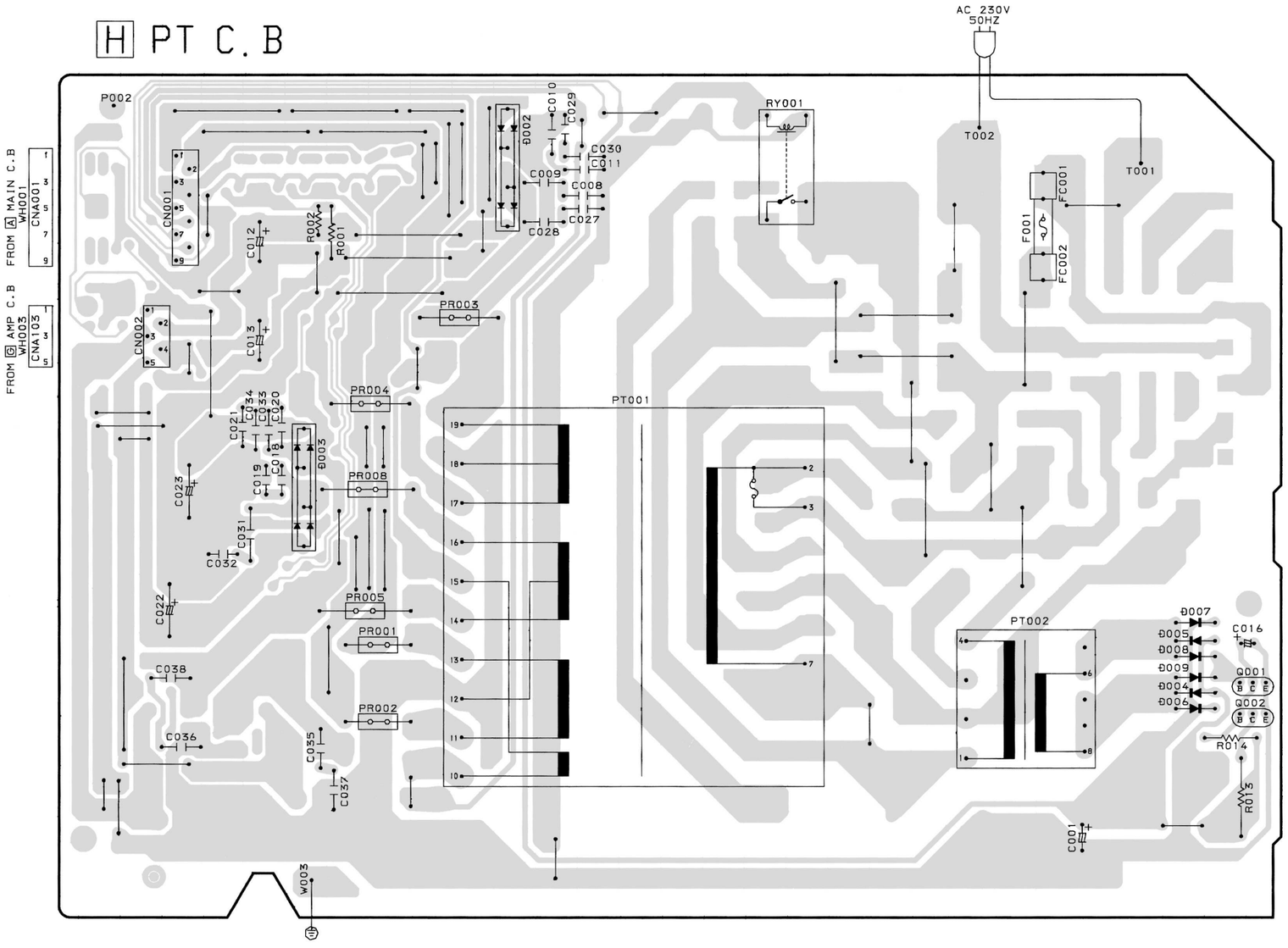

K DECK C.B
FROM B DISPLAY C.B
CN701
FFC701
IC1
IC2
SW1
SW2
SW3
SW4
SW5
SW6
SW8
SW9
(CST1) SW1
(CAM1) SW2
LHT SW3
(DECK MOTOR) M1
SOL1 (DECK1)
W001
(REA) SW4
LH2 SW5
(CST2) SW6
(CAM2) SW8
(REB) SW9
SOL2 (DECK2)
CON105
SFR1
R1
R2
R3
Q1
L HEAD-1 C.B
R+
R-
L-
L+
RED
BLK
GRY
WHT
CON301
TO A MAIN C.B CN301
M HEAD-2 C.B
CON351
TO A MAIN C.B CN351
P HEAD (DECK-1)
ERP HEAD (DECK-2)


C201 2.2/50
C207 0.1
C209 0.22
C211 0.027
C213 0.068
C215 0.01
C217 0.022
C219 2700p
C221 6800p
C223 1000p
C225 2200p
C231 100p
C230 100p
C205 4.7/50
IC201 M624449 FP
GEQ
REFIN
L-IN
F112
F102
F1R2
F212
F202
F2R2
F312
F302
F3R2
F412
F4R2
F4R2
F512
F502
F5R2
L-OUT
Ð-GNÐ
QEQ-CE
ÐATA
100HZ
340HZ
1KHZ
3.4KHZ
10KHZ
AVÐÐ
R-IN
F111
F101
F1R1
F211
F1R1
F2R1
F311
F301
F3R1
F411
F401
F4R1
F511
F501
F5R1
R-OUT
ÐVÐÐ
AVSS
CLK
C229 100p
C202 2.2/50
C208 0.1
C210 0.22
C212 0.027
C214 0.068
C216 0.01
C218 0.022
C220 2700p
C222 6800p
C224 1000p
C226 2200p
R201 120
R202 120
R203 120
R204 120
R205 2.2k
R206 2.2k
C228 0.1
R207 10k
R208 10k
R209 10k
C227 100/16
J GEQ C.B
CN201
IN-L
IN-R
A-GNÐ
OUT-L
OUT-R
VCC
A-GNÐ/QSUR
CLK
ÐATA
GEQ-CE
Ð-GNÐ
SIGNAL :
PB
TO A MAIN C.B (1/3) CN605

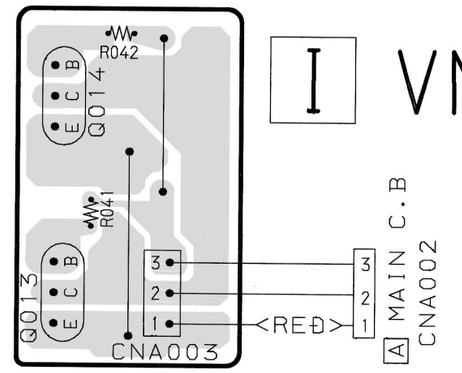
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I J K L M N O P Q R S T U

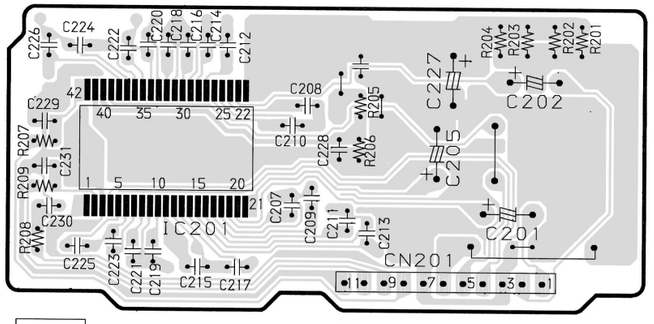
H PT C.B

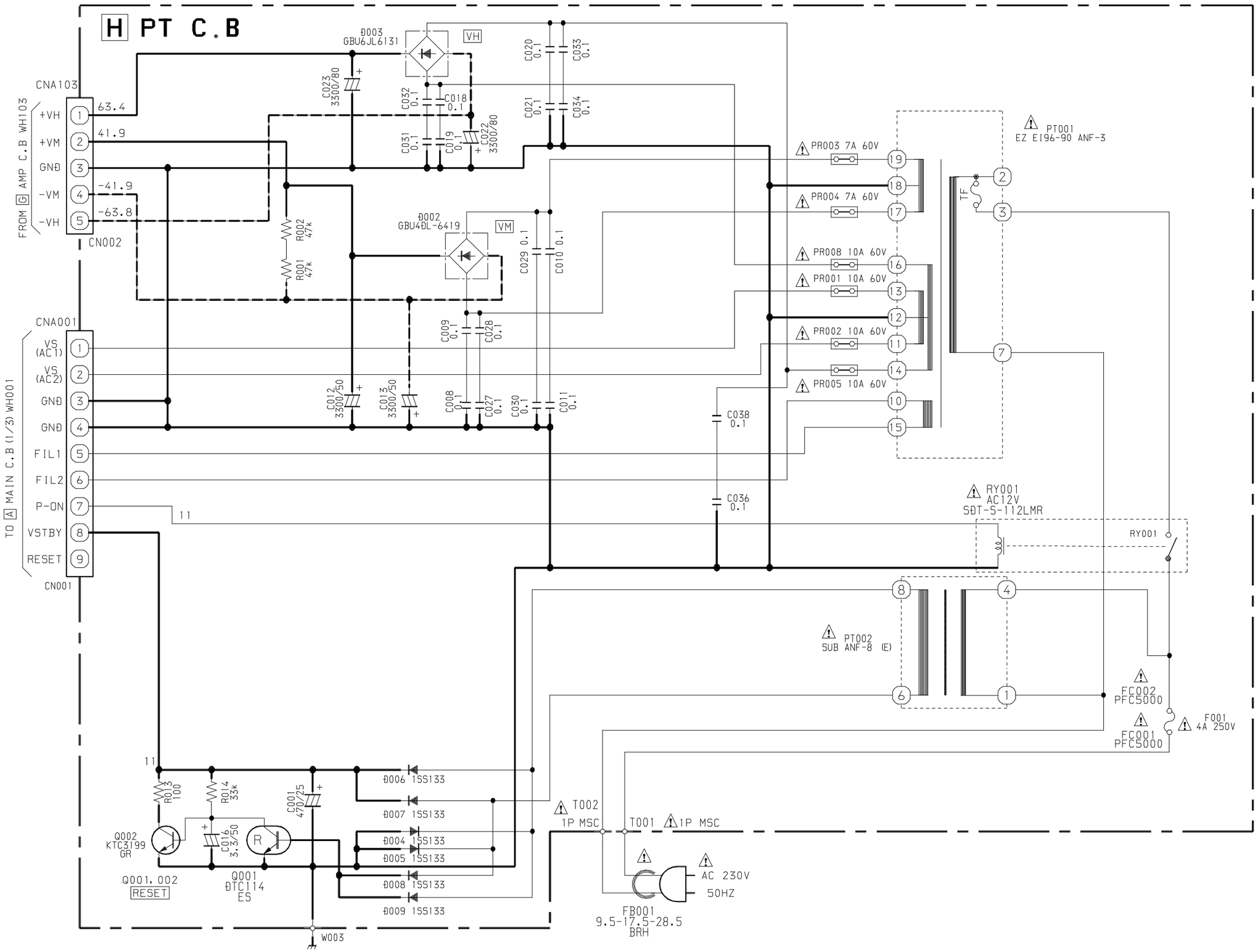


I VM C.B



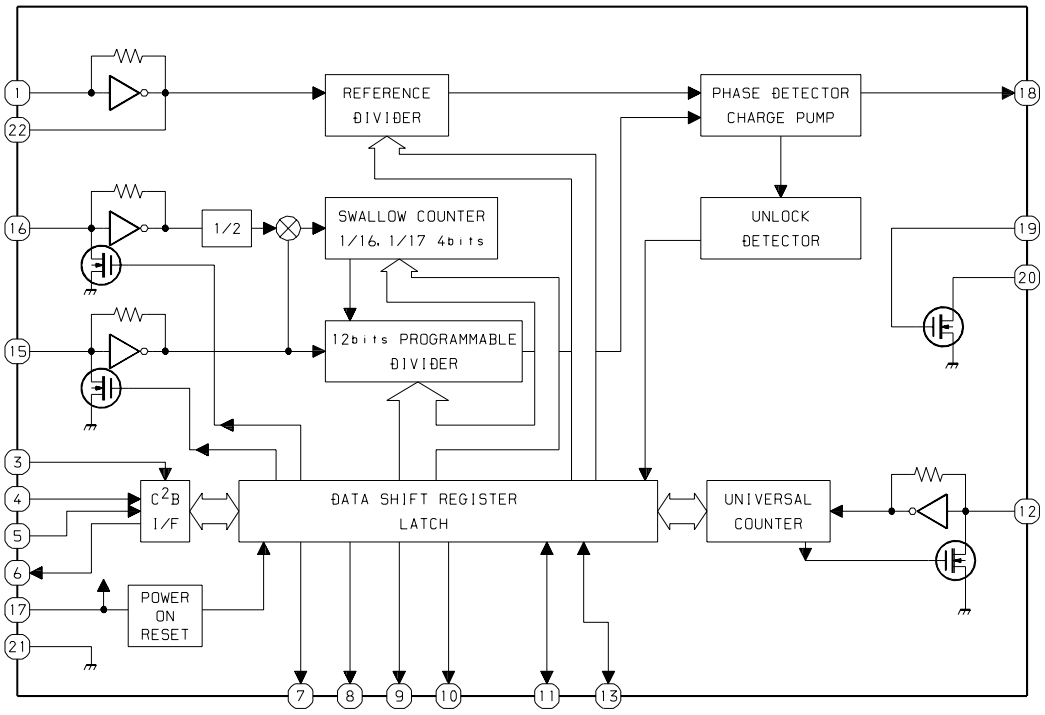
J GEQ C.B



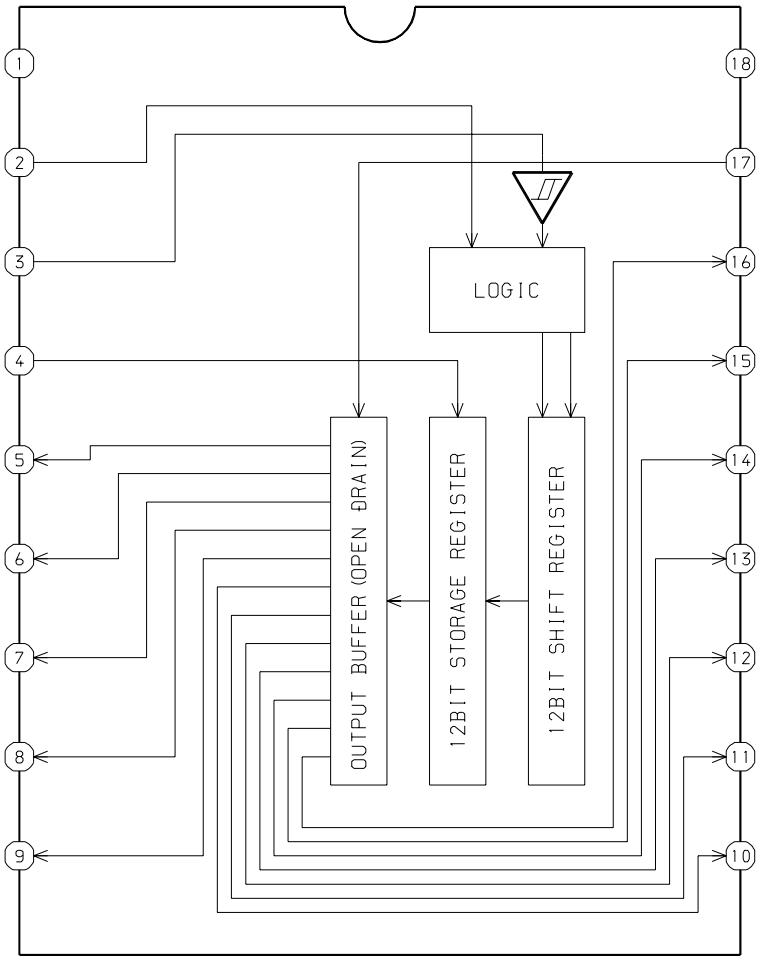

H PT C.B
CNA103
FROM G AMP C.B WH103
+VH
+VM
GND
-VM
-VH
63.4
41.9
-41.9
-63.8
CN002
D003 GBU6JL6131
VH
D002 GBU4DL-6419
VM
R001 47k
R002 47k
C023 3300/80
C032 0.1
C018 0.1
C031 0.1
C019 0.1
C022 3300/80
C020 0.1
C033 0.1
C021 0.1
C034 0.1
C029 0.1
C010 0.1
C009 0.1
C028 0.1
C012 3300/50
C013 3300/50
C008 0.1
C027 0.1
C030 0.1
C011 0.1
C038 0.1
C036 0.1
CNA001
TO A MAIN C.B (1/3) WH001
VS (AC1)
VS (AC2)
GND
GND
FIL1
FIL2
P-ON
VSTBY
RESET
CN001
11
PR003 7A 60V
PR004 7A 60V
PR008 10A 60V
PR001 10A 60V
PR002 10A 60V
PR005 10A 60V
PT001 EZ EI96-90 ANF-3
TF
RY001 AC12V SDT-S-112LMR
RY001
PT002 SUB ANF-8 (E)
FC002 PFC5000
FC001 PFC5000
F001 4A 250V
R013 100
R014 33k
C001 470/25
D006 1SS133
D007 1SS133
D004 1SS133
D005 1SS133
D008 1SS133
D009 1SS133
Q002 KTC3199 GR
C016 3.3/50
Q001, 002 RESET
Q001 DTC114 ES
W003
T002 1P MSC
T001 1P MSC
AC 230V
50HZ
FB001 9.5-17.5-28.5 BRH

IC BLOCK DIAGRAM

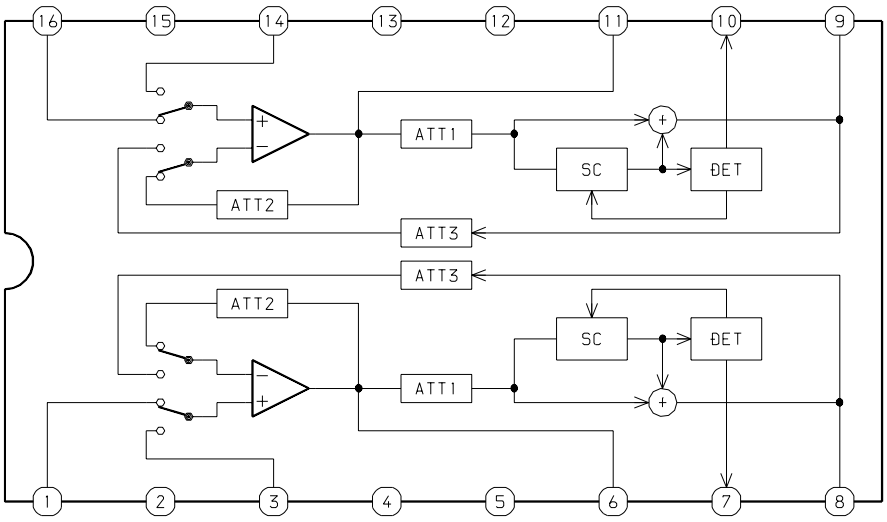
IC, LC72131Đ



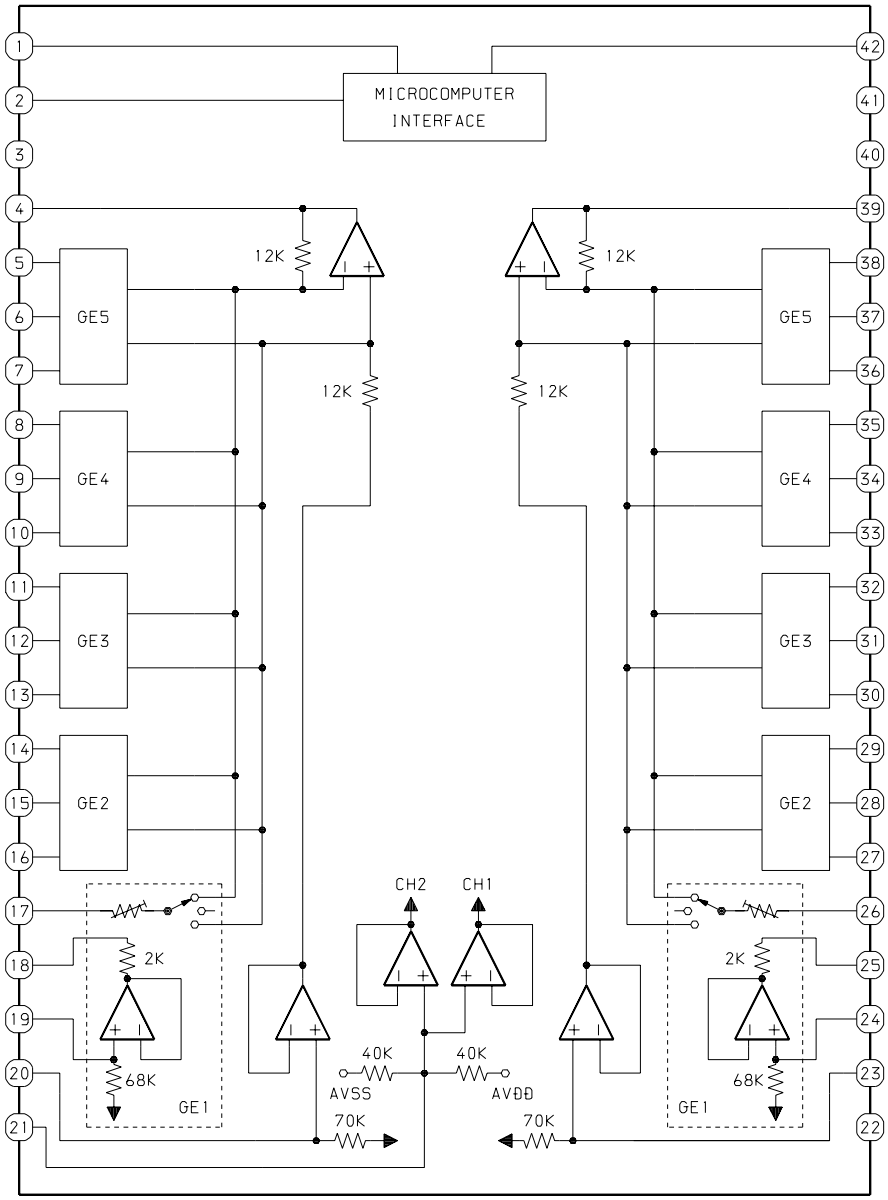
IC, BU2092F



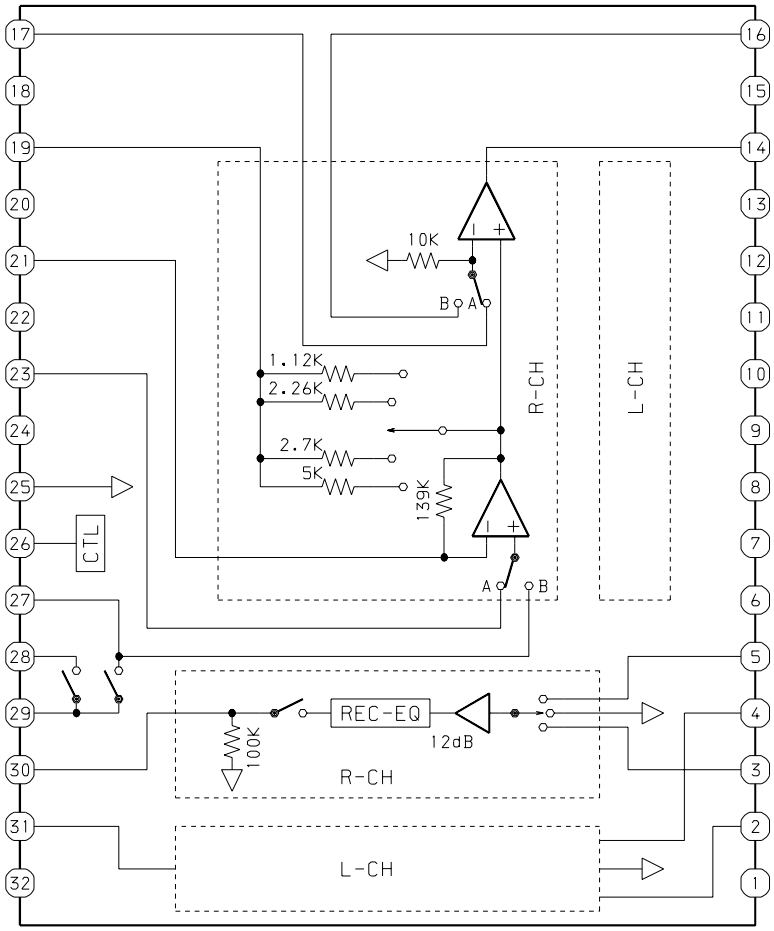
IC, CXA1553P



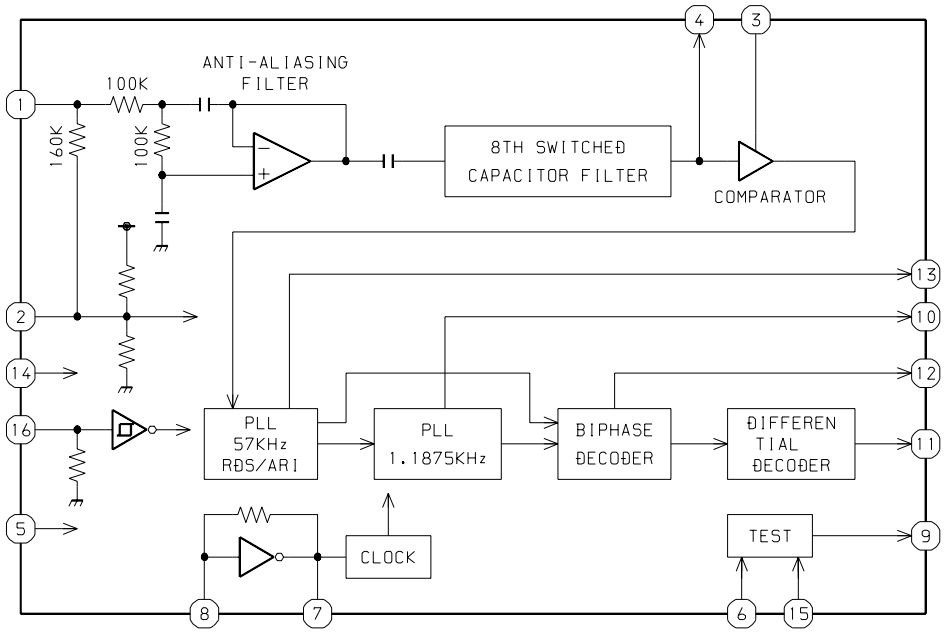
IC, M62449FP



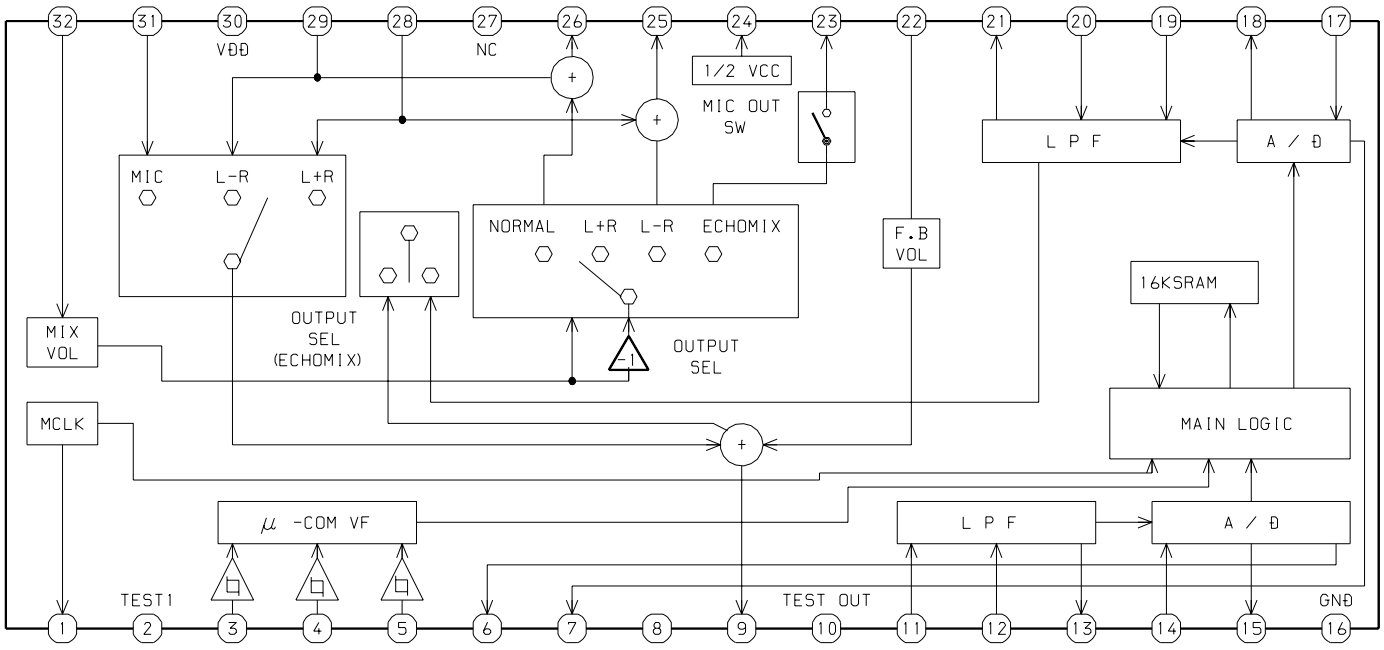
IC, BA7762AFS



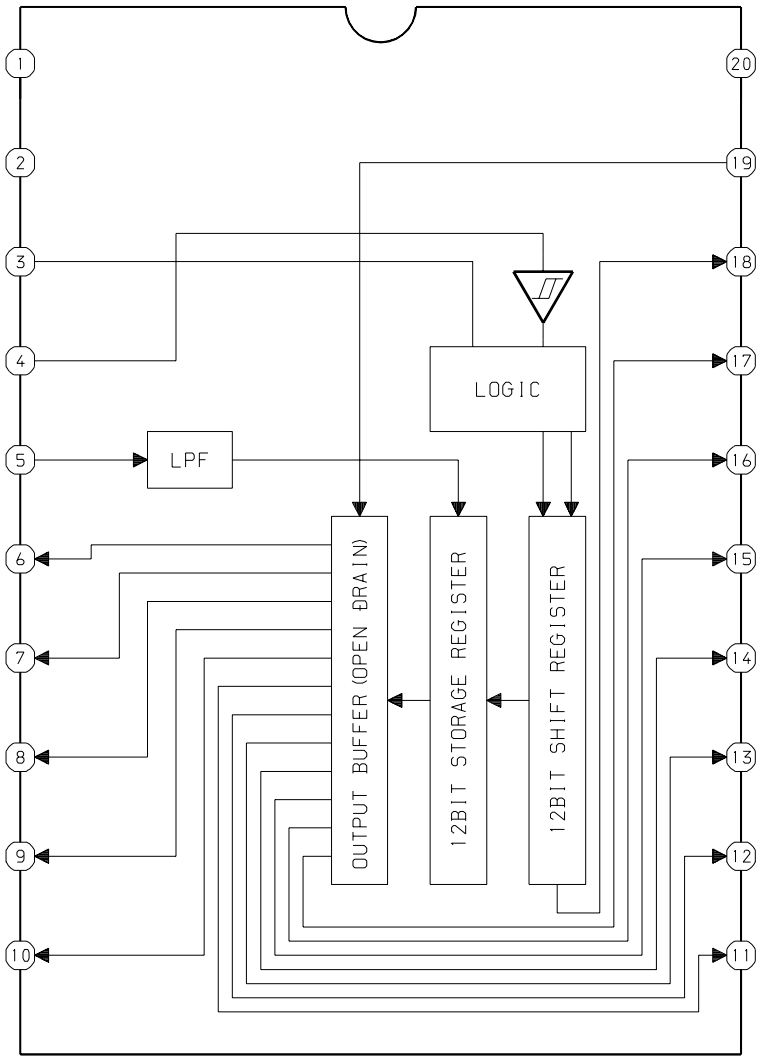
IC, BU1920FS



IC, M65849BFP631Đ



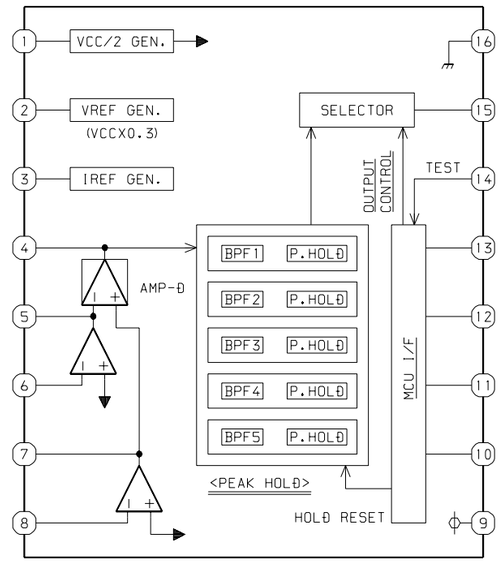
IC, BU2099FV



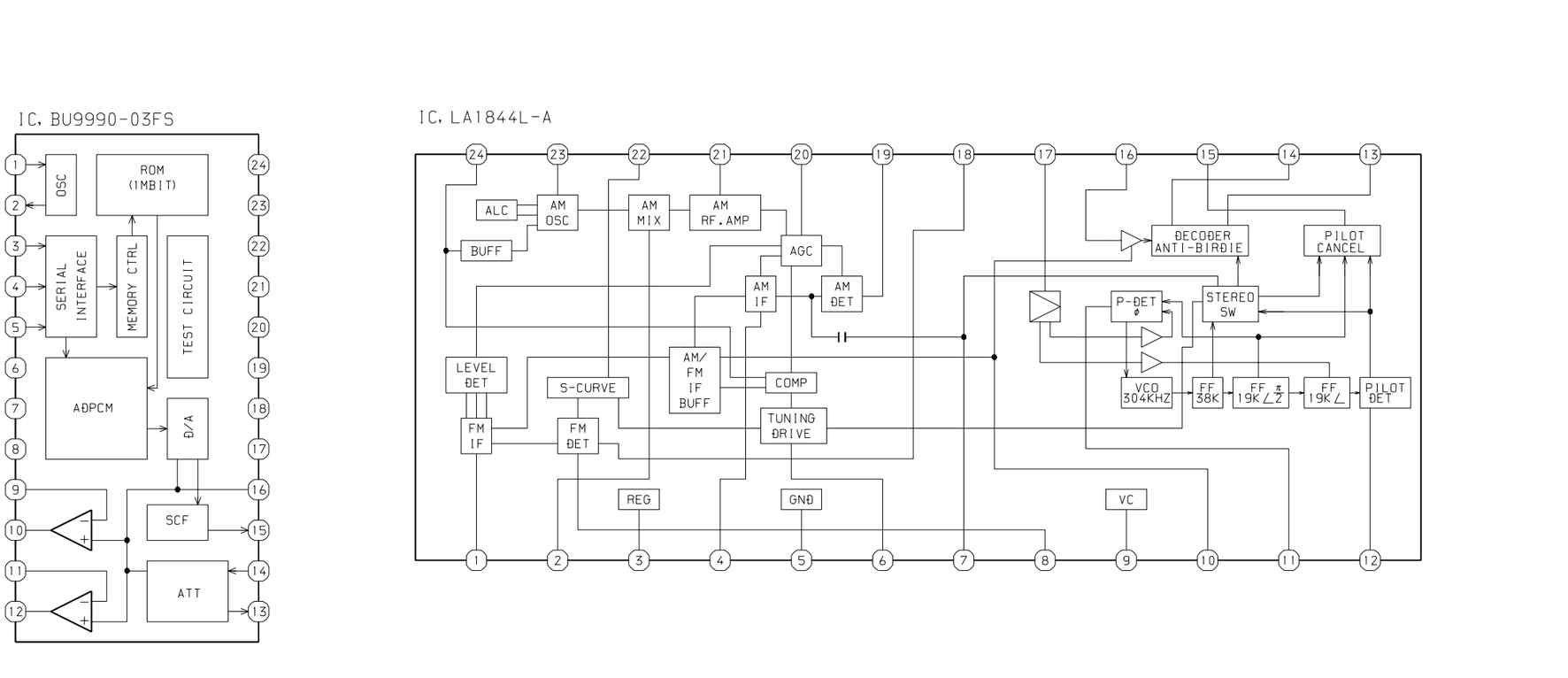
IC, BU9990-03FS

IC, LA1844L-A

IC, M61506FP

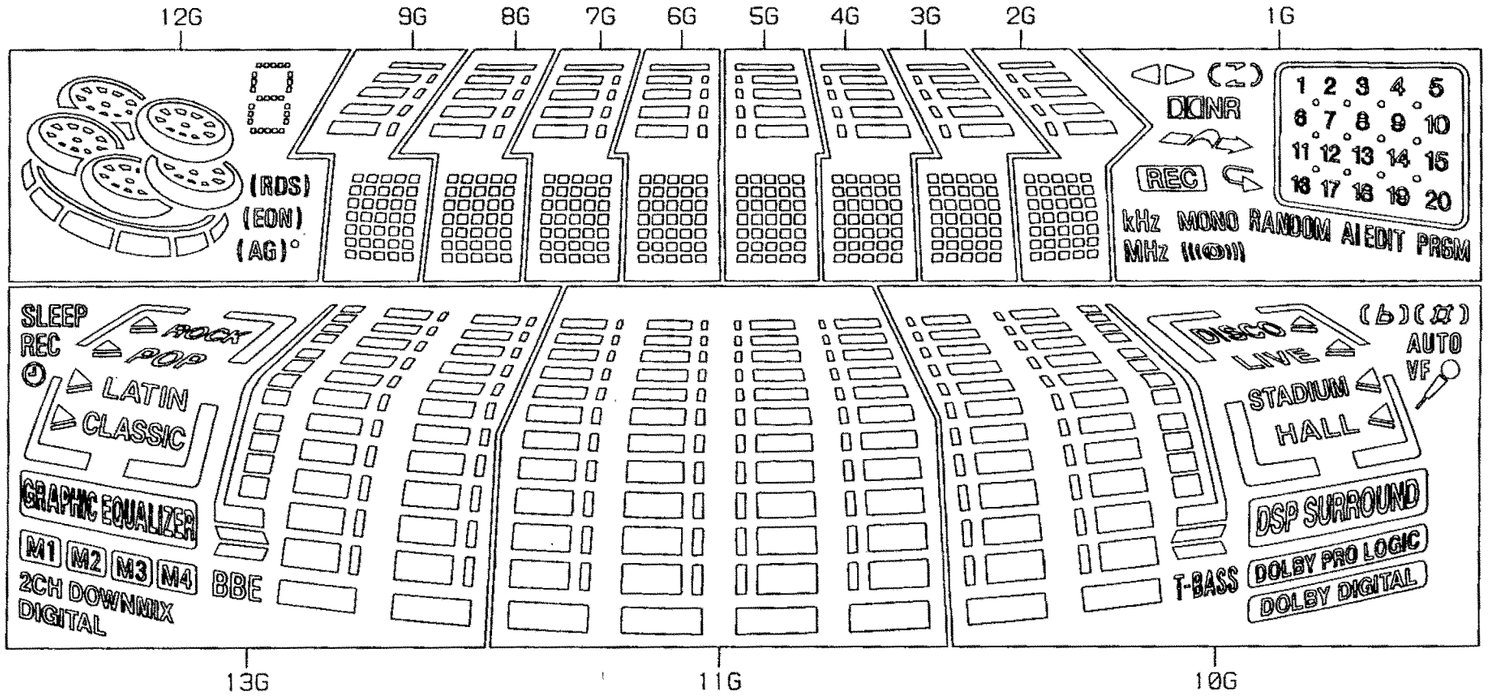


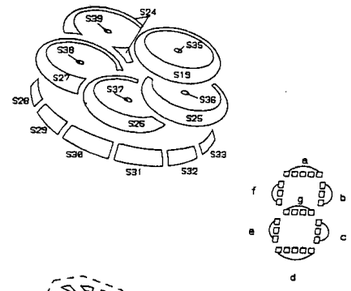
IC, BD3876KS2



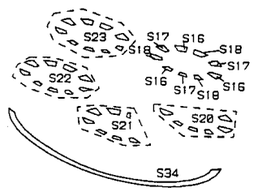
FL (BJ752GK-ANF3) GRID ASSIGNMENT AND ANODE CONNECTION

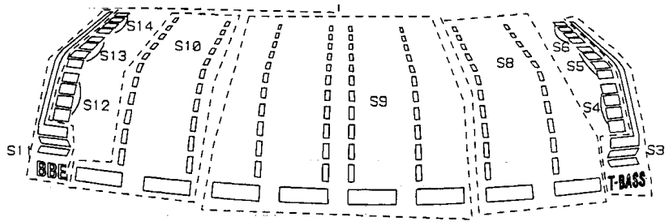
GRID ASSIGNMENT



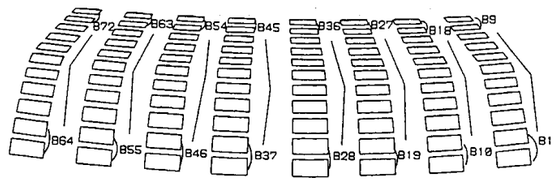


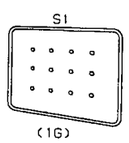
(12G)



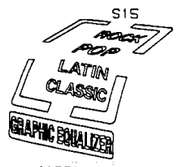


(13G,11G,10G)

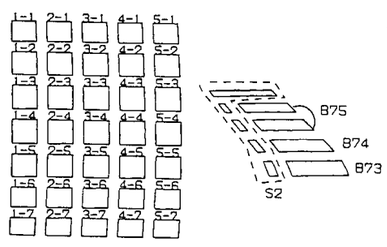




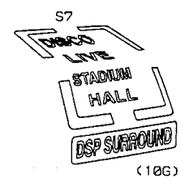
(1G)



(13G)



(9G~2G)



(10G)

ANODE CONNECTION

	13G	12G	11G	10G	9G~2G	1G
P1	S10	○	S9	S8	5-7	S1
P2	B72	( ) (AG)	B54	B18	4-7	PRGM
P3	B63	AG	B45	B9	3-7	AI
P4	B71	( ) (EON)	B36	B17	2-7	EDIT
P5	B62	EON	B27	B8	1-7	RANDOM
P6	B70	( ) (RDS)	B53	B16	5-6	((◎))
P7	B61	RDS	B44	B7	4-6	MONO
P8	B69	S33	B35	B15	3-6	MHz
P9	B60	S32	B26	B6	2-6	kHz
P10	B68	S31	B52	B14	1-6	)
P11	B59	S30	B43	B5	5-5	⇒
P12	B67	S29	B34	B13	4-5	(
P13	B58	S28	B25	B4	3-5	⇦
P14	B66	S34	B51	B12	2-5	⇨
P15	B57	S26	B42	B3	1-5	REC
P16	B65	S25	B33	B11	5-4	DNR
P17	B56	S20	B24	B2	4-4	▷
P18	B64	S36	B50	B10	3-4	◁
P19	B55	S21	B41	B1	2-4	1
P20	S14	S37	B32	S6	1-4	2
P21	S13	S27	B23	S5	5-3	3
P22	S12	S22	B49	S4	4-3	4
P23	S11	S38	B40	S3	3-3	5
P24	S15	S24	B31	S7	2-3	6
P25	(ROCK)	S23	B22	(DISCO)	1-3	7
P26	(POP)	S39	B48	(LIVE)	5-2	8
P27	(LATIN)	S19	B39	(STADIUM)	4-2	9
P28	(CLASSIC)	S35	B30	(HALL)	3-2	10
P29	SLEEP	S16	B21	( ) (♭)	2-2	11
P30	REC	S17	B47	( ) (#)	1-2	12
P31	◎	S18	B38	♭ ♯	5-1	13
P32	M1	d	B29	AUTO	4-1	14
P33	M2	e	B20	TF	3-1	15
P34	M3	c	B46	DOLBY PRO LOGIC	2-1	16
P35	M4	g	B37	DOLBY DIGITAL	1-1	17
P36	2CH DOWNMIX	f	B28	–	B73	18
P37	DIGITAL	b	B19	–	B74	19
P38	–	a	–	–	B75	20
P39	–	–	–	–	S2	–

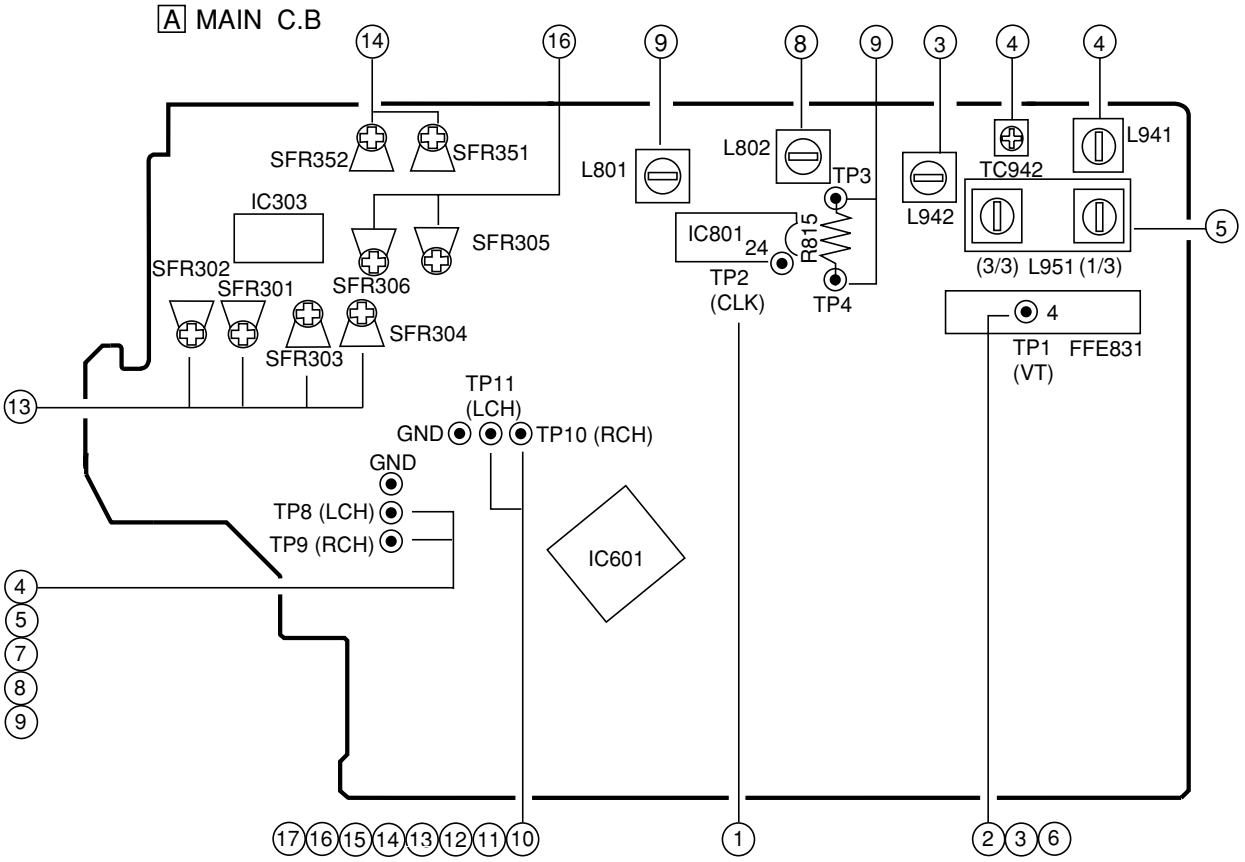
IC DESCRIPTION

IC, LC876596W-5P49

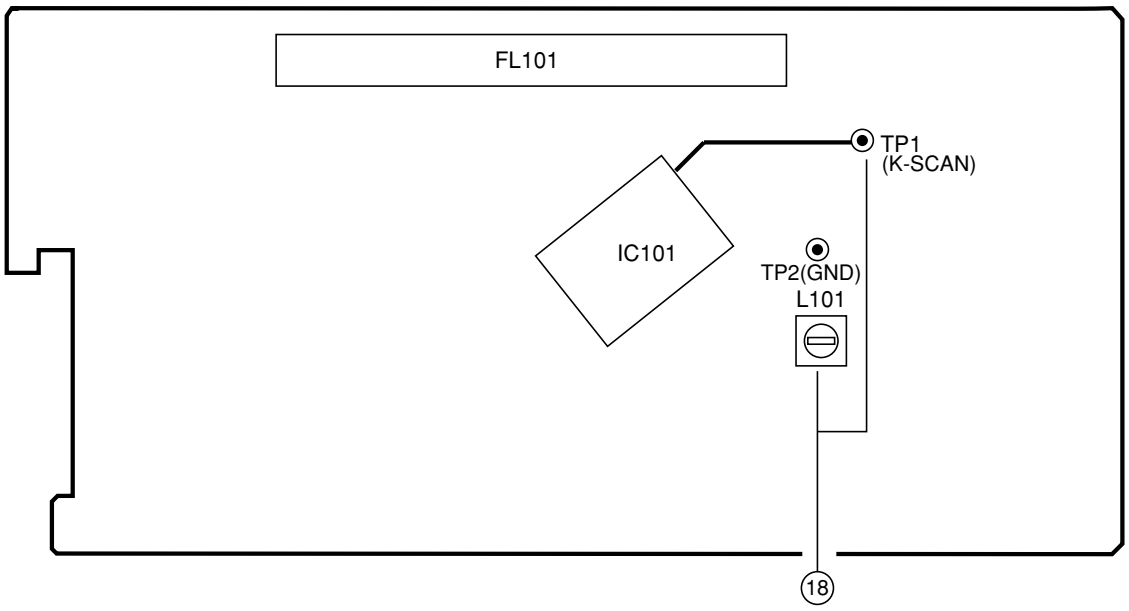
Pin No.	Pin Name	I/O	Description
1	CLK	O	Common serial CLOCK output.
2	DATA	O	Common Serial DATA output.
3	STB	O	Common serial STROBE output.
4	CS-RHYTHM	O	Rhythm IC chip select output.
5	GEQ-CE	O	GEQ IC chip enable output.
6	$\overline{\text{HP-MUTE}}$	I	Headphone plug-in detect input. (Output "L" at HOLD)
7	O-POWER	O	System power ON/$\overline{\text{OFF}}$ output. (Active "H")
8	PLL-CE	O	Tuner PLL IC chip enable output.
9	O-MUTE	O	System mute ON/$\overline{\text{OFF}}$ output.
10	I-MIC	I	Auto-VF MIC level special A/D input. (Output "L" at HOLD)
11	$\overline{\text{RESET}}$	I	Reset input.
12	VOL-JOG	I	Main volume JOG rotary encoder A/D input.
13	MULTI-JOG	I	MULTI JOG rotary encoder A/D input.
14	VSS1	–	Connected to GND.
15	CF 1	–	9.43MHz oscillator circuit.
16	CF2		
17	VDD1	–	Power supply.
18	$\overline{\text{HOLD}}$	I	Power supply voltage detect A/D input.
19 ~ 22	KEY 1 ~ 4	I	KEY 1 ~ 4 A/D input. (Output "L" at HOLD)
23	I-CDSW	I	CD mechanism SW A/D input. (Output "L" at HOLD)
24	I-DISH	I	CD turntable photo sensor A/D input. (Output "L" at HOLD)
25	I-SPEANA	I	SPEANA level A/D input. (Output "L" at HOLD)
26	I-RDSCLK/I-WRQ	I	TUNER RDS IC CLK (INT2) input / CD WRQ input. (Output "L" at HOLD&INI)
27	I-TU-SIG/$\overline{\text{MS}}$	I	Tuner tuning signal level A/D input / Deck MS SENS. (Output "L" at HOLD)
28	I-TMBASE	I	Timebase clock (8Hz) input. (Output "L" at HOLD)
29	$\overline{\text{I-RMC}}$	I	Remote control signal input. Active: "L". (Output "L" at HOLD)
30 ~ 42	G13 ~ G1	O	FL grid G13 ~ G1 output.
43 ~ 45	P39 ~ P37	O	FL segment P39 ~ P37 output.
46	VDD3	–	Power supply.
47	P36/SPEANA A	O	FL segment P36 output / SPEANA band select output (A) .
48	P35/SPEANA B	O	FL segment P35 output / SPEANA band select output (B) .
49	P34/SPEANA C	O	FL segment P34 output / SPEANA band select output (C).
50	P33	O	FL segment P33 output.
51	VP	–	Power supply for FL.
52 ~ 59	P32 ~ P25	O	FL segment P32~ P25 output.
60	P24/NO AC-DEMO	I/O	FL segment P24 output / NO AC-DEMO at AC-IN diode input. (No store DEMO mode.)
61	P23/CASINO-DEMO	I/O	FL segment P23 output / CASINO-DEMO select diode input.
62	P22/NO-ECO	I/O	FL segment P22 output / NO-ECO select input.
63	P21/NO-RHYTHM	I/O	FL segment P21 output / NO-RHYTHM select diode input.
64	P20/AC3-DPL	I/O	FL segment P20 output / AC3-DPL select diode input. (Not used.)

Pin No.	Pin Name	I/O	Description
65	P19/K-CON	I/O	FL segement P19 output / K-CON select diode input. (Not used.)
66	P18/RDS	I/O	FL segement P18 output / RDS select diode input. (Not used.)
67	P17/FM1	I/O	FL segment P17 output / FM1 select diode input. (Not used.)
68	P16/SW	I/O	FL segment P16 output / SW step initial diode input. (Not used.)
69	P15/LW	I/O	FL segment P15output / LW stereo select diode input. (Not used.)
70	P14/AM-10K	I/O	FL segment P14 output /AM-10K select diode input.
71	P13/AM-ST	I/O	FL segment P13 output / AM-ST select diode input. (Not used.)
72	VDD4	–	Power supply.
73~76	P12~P9	O	FL segment P12~P9 output.
77	P8/$\overline{\text{REA}}$	I/O	FL segment P8 ouput / REC enable (A) switch input (active: "L").
78	P7/$\overline{\text{CST1}}$	I/O	FL segment P7 output / Cassette (1) switch.
79	P6/$\overline{\text{CAM1}}$	I/O	FL segment P6 output / CAM (1) switch input (active: "L").
80	P5/AUTO2	I/O	FL segment P5 output / Auto stop reel (2) pulse input.
81	P4/AUTO1	I/O	FL segment P4 output / Auto stop reel (1) pulse input.
82	P3/$\overline{\text{CAM2}}$	I/O	FL segment P3 output / CAM (2) switch input. (active:"L").
83	P2/$\overline{\text{REB}}$	I/O	FL segment P2 output / REC enable (B) switch input. (active:"L").
84	P1/$\overline{\text{CST2}}$	I/O	FL segment P1 output / Cassette (2) switch input. (active:"L").
85	$\overline{\text{K-SCAN}}$	O	Key scan output. (active:"L").
86	$\overline{\text{SOL1}}$	O	DECK (1) solenoid $\overline{\text{ON}}$/OFF output.
87	$\overline{\text{SOL2}}$	O	DECK (2) solenoid $\overline{\text{ON}}$/OFF output.
88	$\overline{\text{O-MOTOR}}$	O	Deck motor $\overline{\text{ON}}$/OFF output .
89	VSS2	–	Connected to GND.
90	VDD2	–	Power supply.
91	O–DISHREV	O	CD turn table dish reverse output.
92	O-DISHFWD	O	CD turn table dish forward output.
93	O-OPEN	O	CD tray open output.
94	O-CLOSE	O	CD tray close output.
95	IFC-$\overline{\text{TU}}$/I-SQDATA	I	Tuner tune/IF count input (active: "L") / CD SUB-Q data input.
96	$\overline{\text{I-STEREO}}$/I-DRF (O-CLK-VCD)	I/O	Tuner stereo detect input (active "L") / DRF input.
97	O-DATA(CD)/ I-RDS DATA	I/O	CD IC control data output / Tuner RDS data input. (Not used.)
98	CD-CE/ IO BUSY (VCD)	I/O	CD chip enable output.
99	CLK (CD)	O	CD IC control clock output.
100	STB(SHIFT)	O	Shift register strobe output.

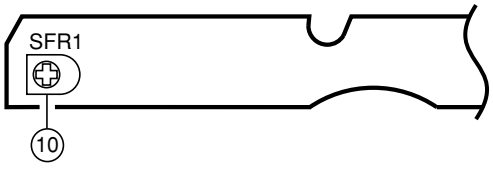
A MAIN C.B



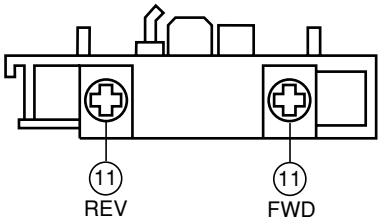
B DISPLAY C.B



K DECK C.B



DECK–1 P,DECK-2 R/P/E HEAD



< TUNER SECTION >

1. Clock Frequency Check
   Settings : • Test point : TP2 (CLK)
   Method : Set to MW 1602kHz and check that the test point is 2052kHz ± 45Hz.

2. MW VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to MW 1602kHz and MW 531kHz and check that the test point is less than 8.0V(1602kHz) and more than 0.6V(531kHz).

3. LW VT Adjustment
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test points becomes 1.5V ± 0.05V.
   Then set to LW 290kHz and check that the test point is less than 8.0V.

4. LW Tracking Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L941..... 144kHz
   TC942..... 290kHz
   Method : Set up TC942 to center before adjustment. The level at 144kHz is adjusted to max. by L941. Then the level at 290kHz is adjusted to max. by TC942.

5. MW Tracking Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L951(1/3)..... 999kHz
   Method : Set to MW 999kHz and adjust L951(1/3) so that the test point is max.

6. FM VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to FM 108.0MHz and check that the test point is less than 8.0V.
   Set to FM 87.5MHz and check that the test point is more than 0.5V.

7. FM Tracking Check
   Settings : • Test point : TP8(Lch), TP9(Rch)
   Method : Set to FM 98.0MHz and check that the test point is less than 13dBμV.

8. MW IF Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location : L802
   • Input level : Variable
   Method : Adjust L802 so that the output becomes max.

9. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP3, TP4
   (DC Balance)
   TP8(Lch), TP9(Rch)
   (Distortion)
   • Adjustment location : L801
   • Input level : 60dBμV
   Method : Set to FM 98.0MHz and adjust L801 so that the distortion is minimum.
   Next, check that the voltage between TP3 and TP4 is 0V ± 0.3V.

< DECK SECTION >

10. Tape Speed Adjustment
    Settings : • Test tape : TTA–100(3kHz)
    • Test point : TP10(Rch), TP11(Lch)
    • Adjustment location : SFR1
    Method : Play back the test tape and adjust SFR1 so that the frequency counter reads 3000Hz ± 5Hz(FWD) and ± 45Hz(REV) with respect to forward speed.

11. Head Azimuth Adjustment
    Settings : • Test tape : TTA–300 (315/10kHz)
    • Test point : TP10(Rch), TP11(Lch)
    • Adjustment location : Head azimuth adjustment screw
    Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

12. PB Frequency Response Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA–300 (315/10kHz)
    • Test point : TP10(Rch), TP11(Lch)
    Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is within 0 ± 2dB.

13. PB Sensitivity Adjustment (DECK 1, DECK 2)
    Settings : • Test tape : TTA–200 (400Hz)
    • Test point : TP10(Rch), TP11(Lch)
    • Adjustment location : SFR301 (DECK 1, Lch)
    SFR302 (DECK 1, Rch)
    SFR303 (DECK 2, Lch)
    SFR304 (DECK 2, Rch)
    Method : Play back the test tape and adjust SFRs so that the output level of the test points become 245mV±10mV.

14. REC/PB Frequency Response Adjustment (DECK 2)
    Settings : • Test tape : TTA–602 (Normal)
    • Test point : TP10(Rch), TP11(Lch)
    • Input signal : 1kHz / 10kHz (LINE IN)
    • Adjustment location : SFR351 (Lch)
    SFR352 (Rch)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the test points becomes 12.5mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output level of the 10kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

15. REC/PB Frequency response Check (DECK 2)
    Settings : • Test tape : TTA-615 (CrO_2)
    • Test point : TP10(Rch), TP11(Lch)
    • Input signal : 1kHz/10kHz (LINE IN)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the test points becomes 12.5mV. Record and play back the 1kHz and 10kHz signals and check that the output is 0dB ± 2dB.

16. REC/PB Sensitivity Adjustment (DECK 2)

Settings : • Test tape : TTA–602 (Normal)
• Test point : TP10(Rch), TP11(Lch)
• Input signal : 1kHz (LINE IN)
• Adjustment location : SFR305 (Lch)
SFR306 (Rch)

Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the test points becomes 125mV. Record the play back the 1kHz signal and adjust SFRs so that the output level becomes 0dB ± 0.5dB

17. REC/PB Sensitivity Check (DECK 2)

Settings : • Test tape : TTA-615 (CrO_2)
• Test point : TP10(Rch), TP11(Lch)
• Input signal : 1kHz (LINE IN)

Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the test points becomes 125mV. Record and play back the 1kHz signal and check that the output is 0dB ± 1.5dB.

< DISPLAY SECTION >

18. µ-CON OSC Adjustment

Settings : • Test point : TP1(K-SCAN), TP2 (GND)
• Adjustment location : L101

Method : Insert AC plug with pressing TUNER function key. Adjust L101 so that the frequency across the test point is 208.8Hz ± 0.2Hz.

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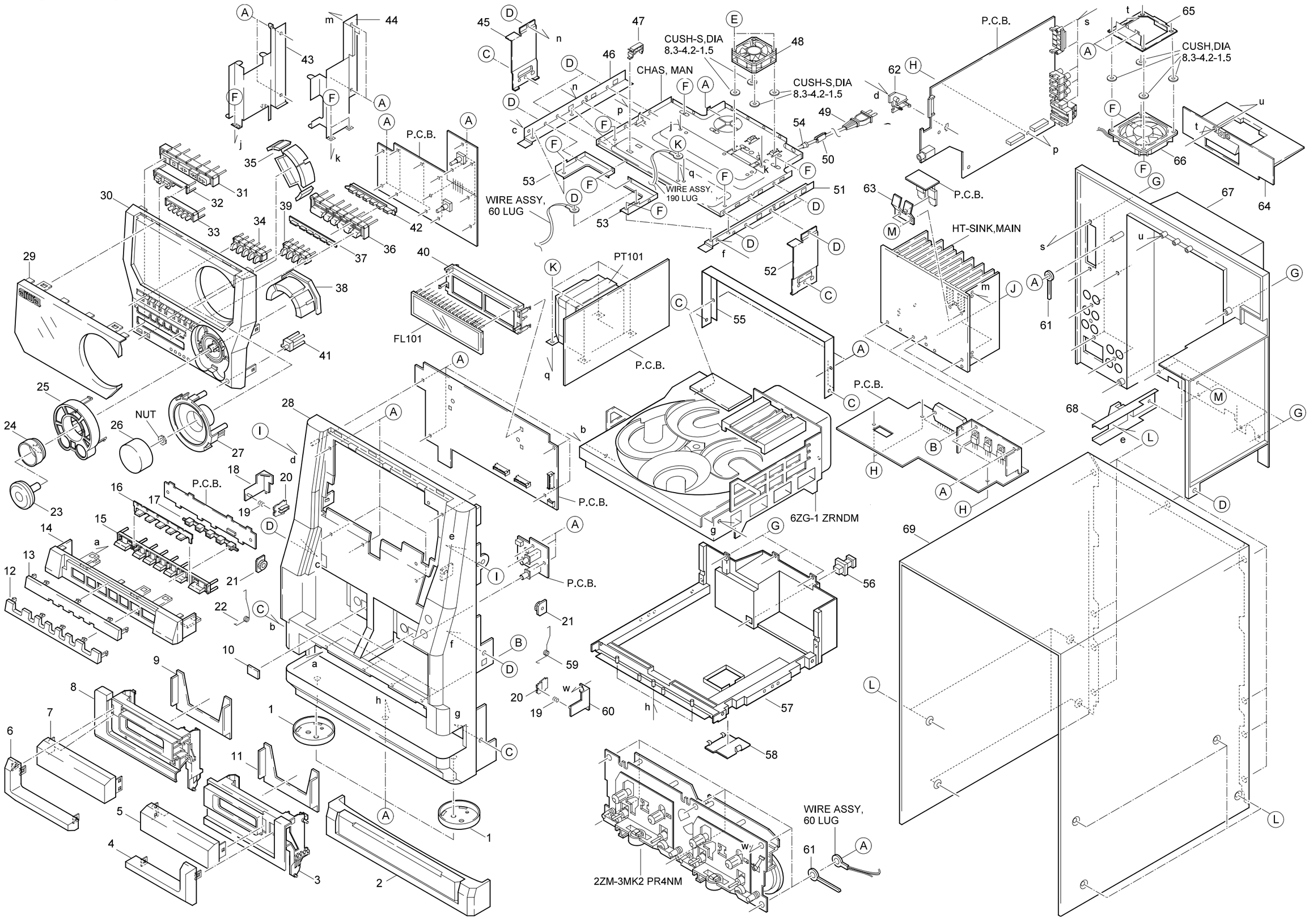
MECHANICAL EXPLODED VIEW 1 / 1



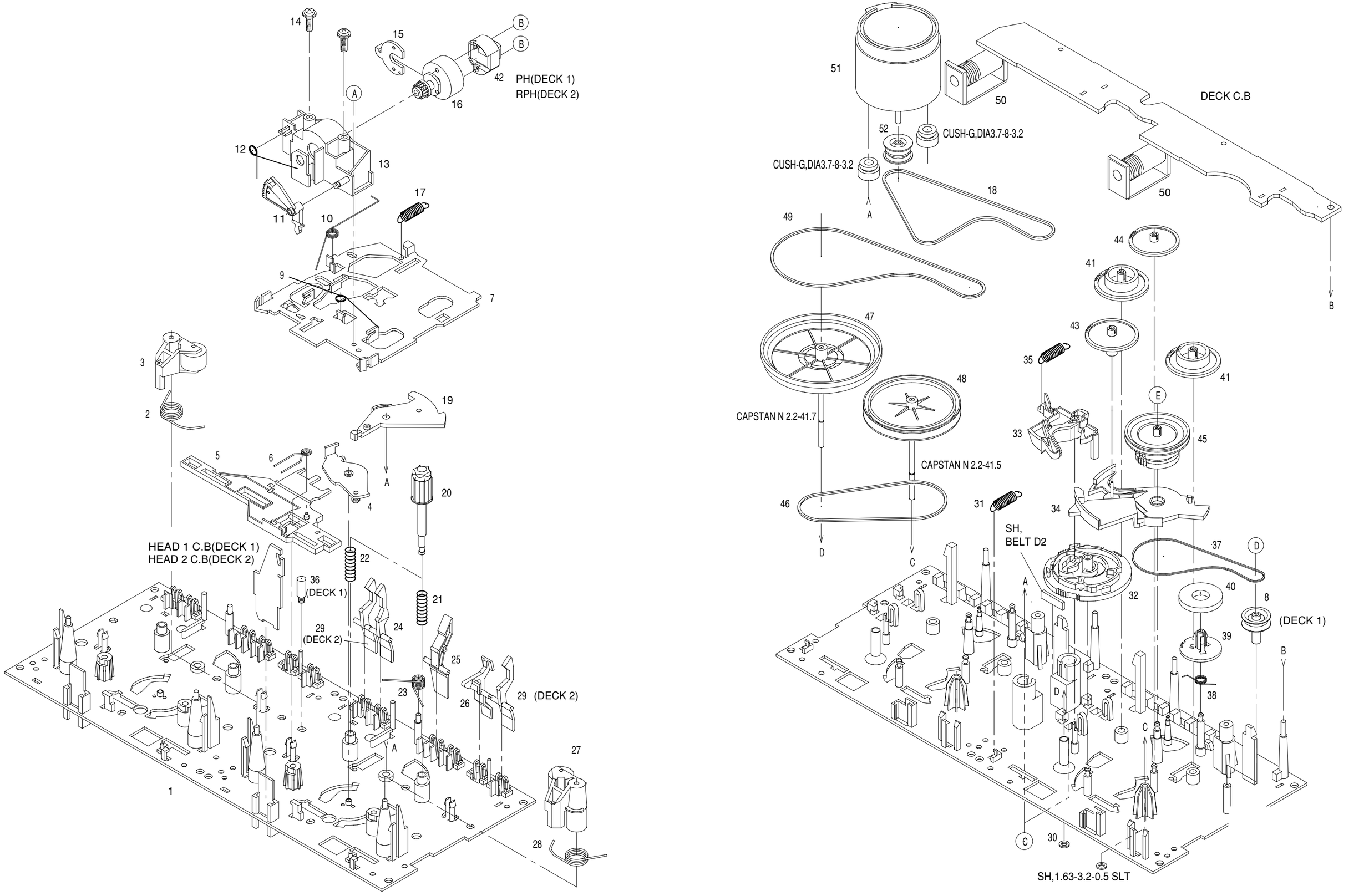
MECHANICAL PART LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-NF3-090-010		RING,FOOT
2	8A-NF3-042-010		PANEL ASSY,TRAY
3	8A-NF3-029-010		BOX,CASS R
4	8A-NF3-040-010		PANEL,CASS R
5	8A-NF3-059-010		WINDOW,CASS R
6	8A-NF3-039-010		PANEL,CASS L
7	8A-NF3-058-010		WINDOW,CASS L
8	8A-NF3-028-010		BOX,CASS L
9	8A-NF3-090-010		REFLECTOR,CASS L
10	81-532-080-010		LABEL, CASS. COMPT
11	8A-NF3-091-010		REFLECTOR,CASS R
12	8A-NF3-048-010		PANEL,REFLECTOR- CD
13	8A-NF3-049-010		PANEL,KEY-CD
14	8A-NF3-047-010		PANEL,CD
15	8A-NF3-071-010		KEY,CD
16	8A-NF3-089-010		REFLECTOR,CD
17	8A-NF3-203-010		GUIDE,LED-CD
18	87-NF4-216-010		HLDR,LOCK 1
19	86-NF9-224-010		SPR-C,LOCK
20	82-NF5-229-010		PLATE,LOCK
21	87-NF8-220-010		DMPR,150
22	82-NF5-218-010		SPR-T,EJECT 1 (SIN)
23	8A-NF3-082-010		KNOB,RTRY JOG
24	8A-NF3-087-010		REFLECTOR,JOG
25	8A-NF3-078-010		RING,JOG U
26	8A-NF3-081-010		KNOB,RTRY VOL
27	8A-NF3-076-010		RING,VOL
28	8A-NF3-002-010		CABI,FR EZ
29	8A-NF3-051-010		WINDOW,DISP
30	8A-NF3-033-010		PANEL,FR EZ
31	8A-NF3-063-010		KEY ASSY,OPE
32	8A-NF3-066-110		KEY,REC
33	8A-NF3-065-010		KEY,KARAOKE
34	8A-NF3-061-010		KEY,GEQ
35	8A-NF3-068-010		KEY,JOG
36	8A-NF3-072-010		KEY,FUNC
37	8A-NF3-088-010		REFLECTOR,FUNC
38	8A-NF3-067-010		KEY,BBE
39	8A-NF3-062-010		KEY,DSP
40	8Z-NF3-210-010		GUIDE,FL
41	8A-NF3-070-010		KEY,ECO
42	8A-NF3-201-010		GUIDE,LED-FUNC
43	8A-NF3-213-110		HLDR,HT-SINK L
44	8A-NF3-214-010		HLDR,HT-SINK R
45	8A-NF3-210-010		HLDR,SIDE L
46	8A-NF3-208-010		HLDR,CHAS L
47	87-NF4-221-010		HLDR,CABLE
48	87-A91-423-010		FAN,AD0612DS-D70GL
⚠ 49	87-A80-148-010		AC CORD ASSY,E BLK
50	87-A90-562-010		F-BEAD,9.5-17.5-28.5 BRH
51	8A-NF3-209-010		HLDR,CHAS R
52	8A-NF3-211-010		HLDR,SIDE R
53	8A-NF3-229-110		HLDR,BRACKET
54	87-085-185-010		BUSHING, AC CORD (E)
55	8A-NF3-212-010		HLDR,REAR
56	84-ZG1-245-210		CAP,OPTICAL
57	8A-NF3-026-010		CABI,BOTTOM
58	8Z-NF3-048-010		COVER, BOTTOM
59	82-NF5-219-010		SPR-T,EJECT 2 (SIN)
60	87-NF4-217-110		HLDR,LOCK 2
61	87-064-185-010		HLDR,WIRE
62	8A-NF8-206-010		HLDR,PWB M
63	8A-NF3-221-010		HLDR,IC-VM
64	8A-NF3-225-010		COVER, HLDR
65	8A-NF3-223-010		HLDR,FAN
66	87-A91-711-010		FAN, 3110GL-B4W-B34-H02 -400MM
67	8A-NF3-014-010		CABI,REAR EZSM
68	8A-NF3-228-010		HLDR,PWB-PT
69	8A-NF3-027-010		CABI,STEEL
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-067-581-010		TAPPING SCREW, BVT2+3-15
C	87-721-097-410		QT2+3-12 GLD
D	87-591-095-410		TAPPING SCREW, QIT+3-8 (GLD)
E	87-B10-190-010		BVT2+3-22 W/O SLOT
F	87-067-689-010		TAPPING SCREW, BVTT+3-8
G	87-067-761-010		TAPPING SCREW, BVT2+3-10
H	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
I	87-721-096-410		QT2+3-10 GLD
J	87-067-758-010		BVT2+3-12 W/O SLOT
K	87-067-975-010		S-SCREW,IT+4-8
L	87-067-641-010		UTT2+3-8(W/O SLOT)BL
M	87-067-579-010		TAPPING SCREW, BVT2+3-8

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange		

TAPE MECHANISM EXPLODED VIEW 1 / 1



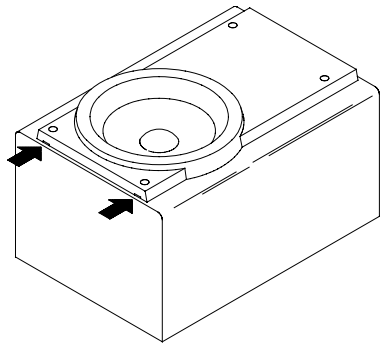
TAPE MECHANISIM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM3-301-610	1H	CHAS ASSY,M2
2	82-ZM1-258-210	0E	SPR-T,PINCH L
3	82-ZM1-341-210	1A	LVR ASSY,PINCH L2
4	82-ZM1-333-210	0E	PLATE,LINK2
5	82-ZM1-266-310	0E	LVR,DIR
6	82-ZM1-214-010	0E	SPR-T,DIR
7	82-ZM1-206-910	1A	CHAS,HEAD
8	82-ZM3-335-310	0E	PULLEY,COUPLER M3
9	82-ZM1-269-210	0E	SPR-T,BRG
10	82-ZM1-219-110	0E	SPR-T,LINK
11	82-ZM1-210-110	0E	GEAR,H T
12	82-ZM1-213-010	0E	SPR-T,HEAD
13	82-ZM1-207-910	1A	GUIDE,TAPE
14	86-ZM4-206-010	0E	S-SCREW,AZIMUTH L
15	82-ZM1-314-110	0E	PLATE,HEAD
16	82-ZM1-208-310	0E	HLDR,HEAD
17	82-ZM1-218-010	0E	SPR-E,HB
18	82-ZM3-342-010	0E	BELT,SBU MOT 3
19	82-ZM1-222-210	0E	LVR,PLAY
20	82-ZM1-217-410	0E	REEL TABLE
21	82-ZM1-244-510	0E	SPR-C,BT
22	82-ZM1-285-410	0E	SPR-C,BT L
23	82-ZM1-257-010	0E	SPR-T,CAS
24	82-ZM1-241-310	0E	LVR,MC
25	82-ZM1-242-010	0E	LVR,CAS
26	82-ZM1-243-010	0E	LVR,STOP
28	82-ZM1-259-210	0E	SPR-T,PINCH R
29	82-ZM1-240-110	0E	LVR,REC(*)
30	80-ZM6-243-010	0E	SH 1.75-3.6-0.5 SLT
31	82-ZM1-255-310	0E	SPR-E,LVR DIR
32	82-ZM3-305-210	0E	GEAR,CAM M2
33	82-ZM1-227-310	0E	LVR,TRIG
34	82-ZM3-306-110	0E	LVR,FR M2
35	82-ZM1-265-310	0E	SPR-E,TRIG
36	82-ZM3-339-110	0E	SHAFT,COUPLER N3
37	86-ZM1-206-010	0E	BELT,MAIN L
38	82-ZM1-322-010	0E	SPR-T,FR 60
39	82-ZM1-220-210	0E	GEAR,IDLER
40	82-ZM3-616-010	0E	RING MAGNET 4
41	82-ZM1-216-410	0E	GEAR,REEL
42	87-A90-820-010	1D	HEAD,PH HADKH25 FPC
42	87-A90-821-010	1H	HEAD,RPH HADKH56 FPC
43	82-ZM1-225-210	0E	GEAR,FR
44	82-ZM1-226-010	0E	GEAR,REW
45	82-ZM3-333-310	1A	SLIP DISK ASSY 2
46	82-ZM1-338-110	0E	BELT,FR 4
47	82-ZM1-349-110	1A	FLY-WHL,R W
47	82-ZM1-348-110	0E	FLY-WHL,L W
47	82-ZM3-338-310	1A	FLY-WHL,R3W
48	82-ZM1-344-210	0E	LVR ASSY,PINCH R2
49	82-ZM3-329-410	0E	BELT,SBU R2
50	82-ZM1-618-410	1B	SOL ASSY,27
51	87-045-347-010	1H	MOT,SHU2L 70
52	82-ZM3-221-210	0E	PULLEY,MOT 2M
A	85-ZM3-202-010	0E	S-SCREW,TG
B	80-ZM6-207-010	0E	V+1.6-7
C	82-ZM3-318-110	0E	S-SCREW W,MOTOR M2
D	87-B10-043-010	0E	W-P,0.99-4-0.25 SLT
E	82-ZM3-334-010	0E	PW 2.16-6-0.4

SPEAKER DISASSEMBLY INSTRUCTIONS

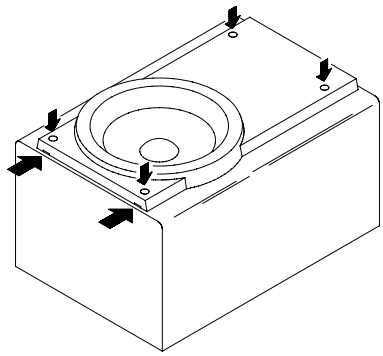
Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



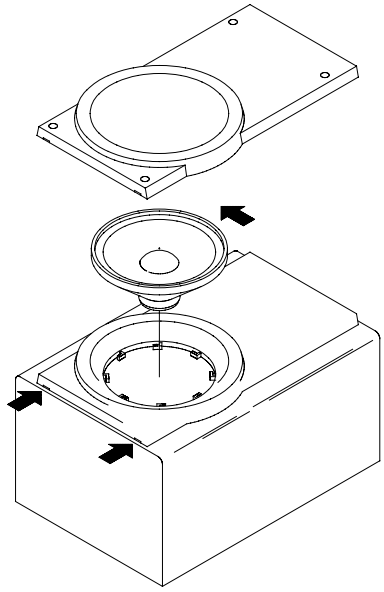
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

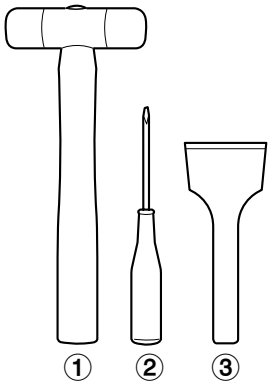


Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



Type.4



TOOLS

① Plastic head hammer
② (⊖) flat head screwdriver
③ Cut chisel

How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.

2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.

3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

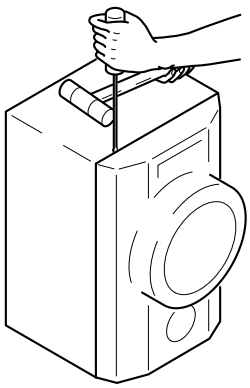


Fig-1

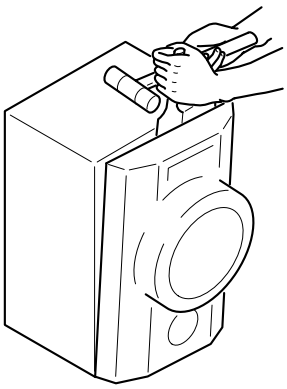


Fig-2

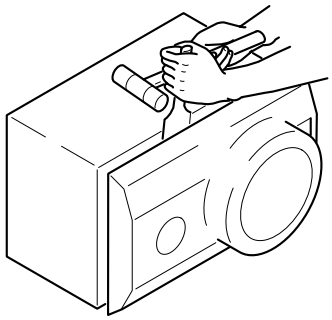


Fig-3

How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

SPEAKER PARTS LIST SX-WNT99 <YSL>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NS3-001-010		PANEL,FR
2	8A-NS3-002-010		PANEL,TW L
3	8A-NS3-003-010		PANEL,TW R
4	8A-NS3-006-010		PANEL,TOP
5	8A-NS3-010-010		PROTECTOR,SQA
6	8A-NS3-011-010		PROTECTOR,TWA
7	8A-MS1-602-010		SPKR,W 200
8	8A-NS3-602-010		SPKR,M 100
9	8A-MS2-605-110		SPKR,TW 60
10	88-NSK-610-010		SPKR,CERAMIC ASSY
11	88-NS5-610-010		CORD,SPKR
12	88-NS5-611-010		CORD,SPKR B/L
13	8A-NSJ-006-010		BADGE,AIWA S35
14	8A-NS3-014-010		CABI,TOP
15	8A-NS3-017-010		PANEL,RING S
16	8A-NS3-015-010		PANEL,DUCT S

ACCESORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NF3-906-010		IB,EZ (9L) M
2	87-006-225-010		AM LOOP ANT NC2
3	87-A90-118-010		ANT,FEEDER FM (Z)
4	8Z-NF5-702-010		RC UNIT,RC-ZAS04

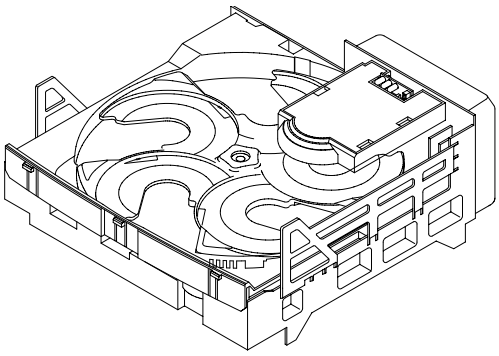
アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)
AIWA CO.,LTD. 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110, JAPAN TEL:03 (3827) 3111

9620450 9630472 0251431 Printed in Singapore

aiwa SERVICE

6ZG-1

English



SERVICE MANUAL

CD-R/RW MECHANISM

BASIC CD MECHANISM :3ZG-2 E2

TYPE
ZRDM
ZRNDM
YZRNDM
YZRNDCM

aiwa

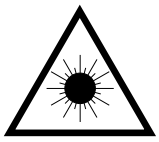
S/M Code No. 09-001-338-7N2

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

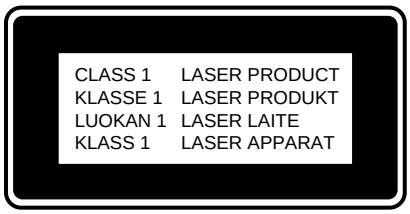
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

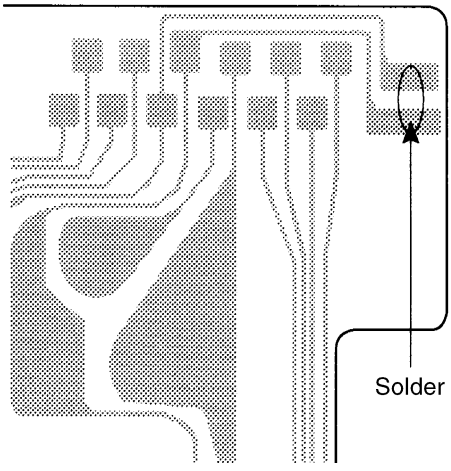


Precaution to replace Optical block (KSS-213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

PICK-UP Assy P.C.B



DISASSEMBLY INSTRUCTIONS

1. How to replace PICK UP.

1) Open the TRAY.
   Push the stopper to arrow direction and release half of the SHAFT SLED.
2) Turn GEAR MAIN CAM to the counterclockwise (arrow “a”) direction, and lift up CD mechanism. (Fig-1)
3) Remove SHAFT SLED.
4) CD mechanism in down position, replace PICK UP.
5) Lift up CD mechanism (Fig-1), and Reassemble the SHAFT SLED.

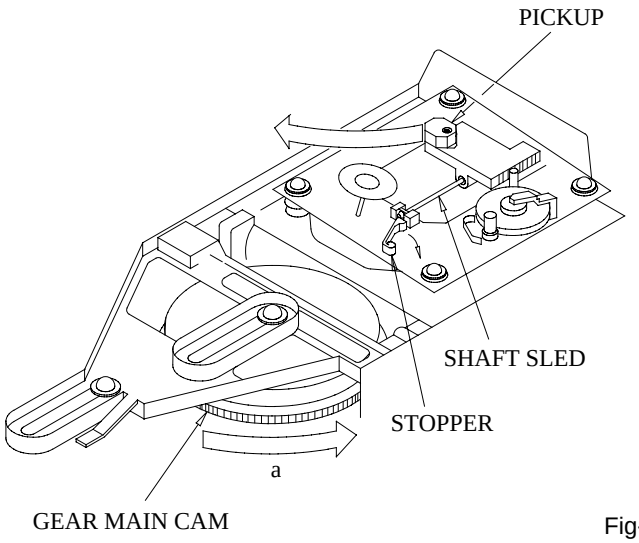
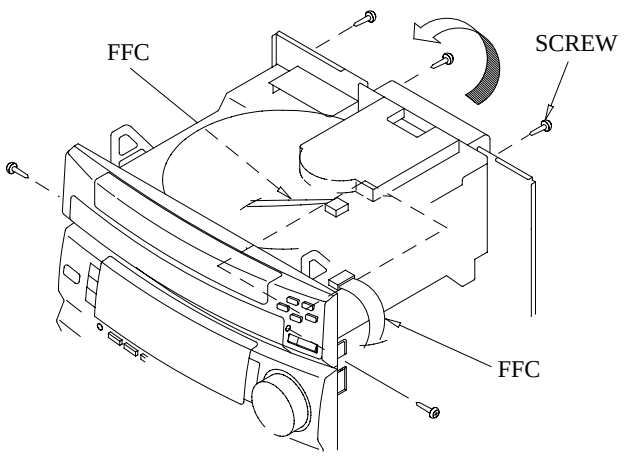


Fig-1

2. How to remove the 5CD CHANGER BLOCK (Fig-2)

1) Remove the two FFC of the CD circuit board, and remove the five SCREWS.
2) Lift 5 CD CHANGER BLOCK from behind, and remove it. (5CD CHANGER BLOCK can be removed even if PANEL TRAY is not removed.)



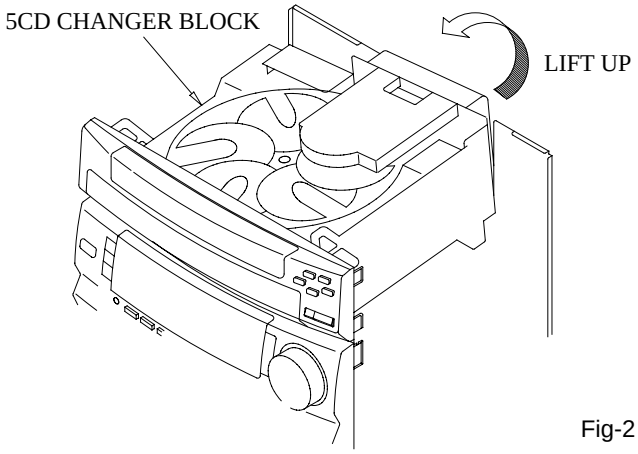
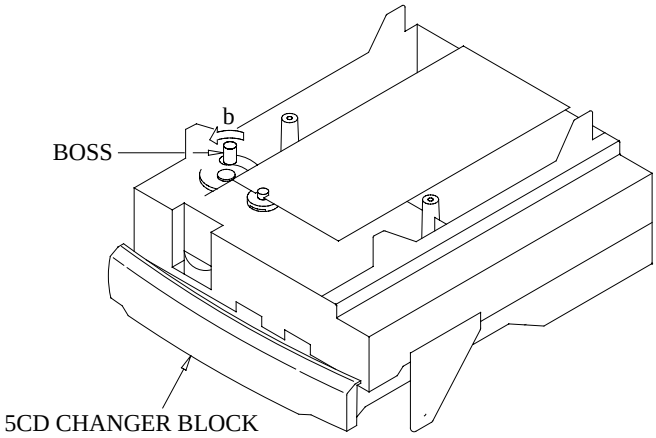


Fig-2

3. The disassemble and reassemble the TRAY

3-1. Disassembling procedure.

1) Push the PLATE GEAR'S Boss at the bottom part of CHAS MECHA strongly to the outside (arrow "b" direction). (Fig-3)
   (Confirm that TRAY appears a little in the front.)
2) Draw TRAY to the open position.
3) Remove FFC, and push the two LEVERS at both side of the CHAS MECH to remove TRAY. (Fig-4)



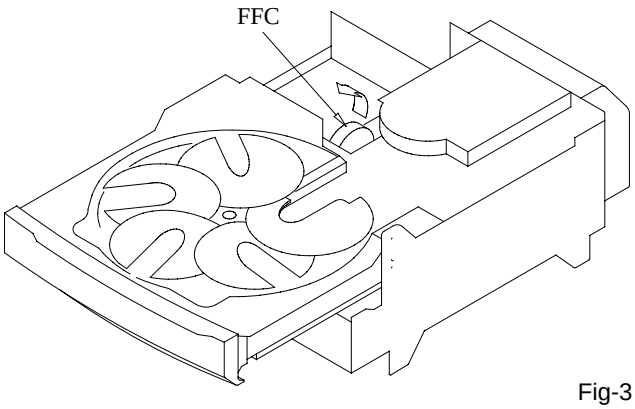


Fig-3

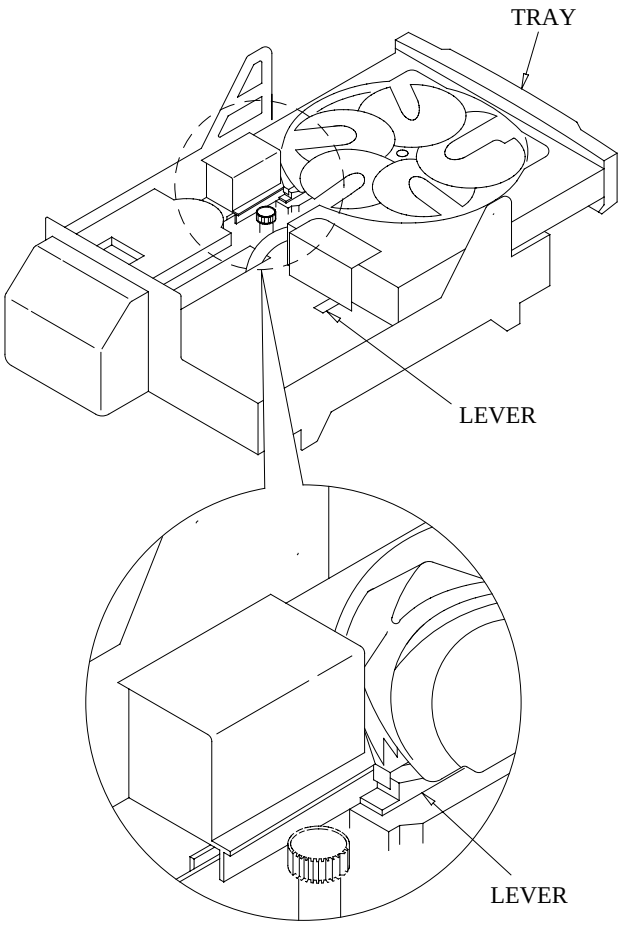


Fig-4

3-2. Reassembling procedure.

1) Confirm that LEVER TRAY is at the most right position and check for the CD Mechanism to be in the down position. (Fig-5)
2) Push in the TRAY along the rail of the CHAS MECHA.
3) After TRAY is half closed and FFC is put in, it can enter by force until the end of TRAY closed. (Fig-6)

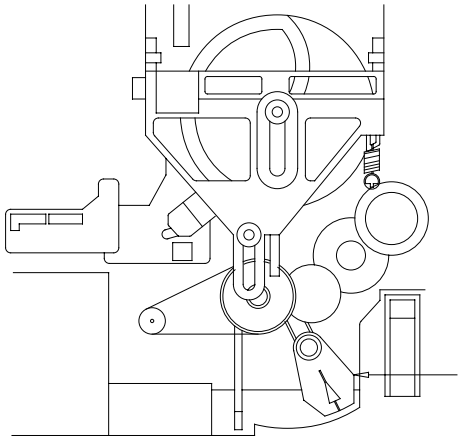


Fig-5

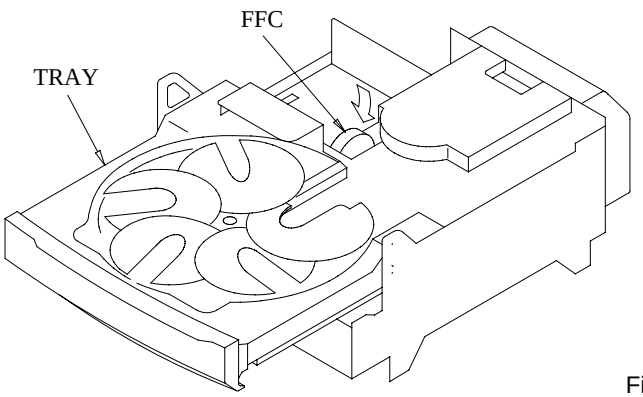


Fig-6

4. How to reassemble the TURN TABLE. (Fig-7)

1) Push LEVER TT in the direction of “C”, and put in the TURN TABLE 5CD. (Fig-7)
After reassembly, one of the TURN TABLE DISC TRAY (can be either one of the five disc trays) must be aligned with TURN TABLE 5CD. (Fig-8)
That is, having no gap difference between the TURN TABLE 5CD and the TRAY 5CD.

* When reassembling the TURN TABLE 5CD, it is acceptable facing any CD number (1-5).

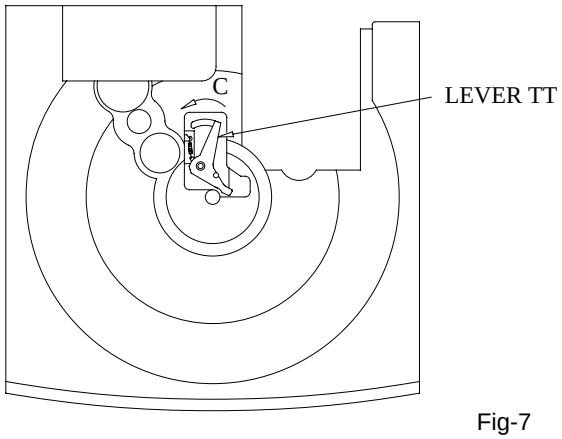


Fig-7

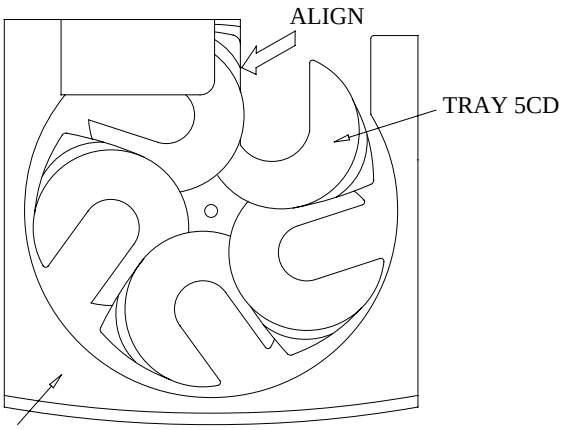


Fig-8

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

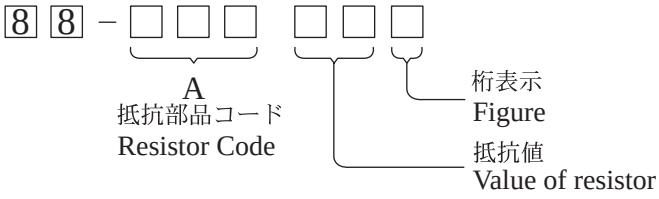
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A21-381-040		C-IC,LA9235M
	87-A21-591-010		C-IC,LC78641NE-D
	87-001-982-010		IC,TA7291S
	87-A21-513-040		C-IC,BA6998FP
TRANSISTOR			
	87-026-609-080		TR,KTA1266GR
	87-A30-076-080		C-TR,2SC3052F
	87-A30-318-080		TR,CSA952K
	89-421-722-380		TR,2SD2172V/W
	89-320-011-080		TR,2SC2001 (15W)
	87-026-223-080		TR,DTC143TK
	87-A30-031-010		P-TR,PT380F
	87-026-608-080		C-TR,DTC 123 JK<ZRDM>
	87-A30-075-080		C-TR,2SA1235F
DIODE			
	87-A40-003-080		ZENER,MTZJ4.3A
	87-A40-509-080		ZENER,MTZJ6.8C
	87-A40-313-080		C-DIODE,MC 2840
	87-020-465-080		DIODE,1SS133 (110MA)
5CD C.B			
C1	87-010-374-080		CAP, ELECT 47-10V
C2	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C2	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C3	87-010-553-080		CAP,E 47-16
C4	87-010-260-080		CAP, ELECT 47-25V
C5	87-010-197-020		C-CAP,S 0.01-25 B<ZRNDM,YZRNDM>
C5	87-010-197-080		CAP, CHIP 0.01 DM<YZRNDCM,ZRDM>
C6	87-010-405-080		CAP, ELECT 10-50V
C7	87-010-263-080		CAP, ELECT 100-10V
C8	87-010-178-020		C-CAP,S 1000-50 B<ZRNDM,YZRNDM>
C8	87-010-178-080		CHIP CAP 1000P<YZRNDCM,ZRDM>
C10	87-010-069-080		CAP,E 0.33-50 5L
C11	87-010-071-080		CAP, ELECT 1-50 M 5L SRE
C13	87-010-321-020		C-CAP,S 82P-50 CH<ZRNDM,YZRNDM>
C13	87-010-321-080		CHIP CAPACITOR,82P(J) <YZRNDCM,ZRDM>
C15	87-010-197-020		C-CAP,S 0.01-25 B<ZRNDM,YZRNDM>
C15	87-010-197-080		CAP, CHIP 0.01 DM<YZRNDCM,ZRDM>
C16	87-010-553-080		CAP,E 47-16
C65	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C65	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C75	87-010-197-020		C-CAP,S 0.01-25 B<ZRNDM,YZRNDM>
C75	87-010-197-080		CAP, CHIP 0.01 DM<YZRNDCM,ZRDM>
C101	87-010-194-080		CAP, CHIP 0.047
C102	87-010-071-080		CAP, ELECT 1-50 M 5L SRE
C103	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C103	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C104	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C104	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C105	87-010-260-080		CAP, ELECT 47-25V
C106	87-010-322-020		C-CAP,S 100P-50 CH<ZRNDM,YZRNDM>
C106	87-010-322-080		C-CAP,S 100P-50 CH<YZRNDCM,ZRDM>
C107	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C107	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C109	87-010-194-080		CAP, CHIP 0.047
C110	87-010-322-020		C-CAP,S 100P-50 CH<ZRNDM,YZRNDM>
C110	87-010-322-080		C-CAP,S 100P-50 CH<YZRNDCM,ZRDM>
C111	87-010-260-080		CAP, ELECT 47-25V
C112	87-010-197-020		C-CAP,S 0.01-25 B<ZRNDM,YZRNDM>
C112	87-010-197-080		CAP, CHIP 0.01 DM<YZRNDCM,ZRDM>
C114	87-010-553-080		CAP,E 47-16
C115	87-010-197-020		C-CAP,S 0.01-25 B<ZRNDM,YZRNDM>
C115	87-010-197-080		CAP, CHIP 0.01 DM<YZRNDCM,ZRDM>
C116	87-010-260-080		CAP, ELECT 47-25V
C117	87-010-197-020		C-CAP,S 0.01-25 B<ZRNDM,YZRNDM>
C117	87-010-197-080		CAP, CHIP 0.01 DM<YZRNDCM,ZRDM>
C118	87-010-264-080		CAP,E 100-10 5L
C119	87-015-819-080		CAPACITOR,0.01
C120	87-010-312-020		C-CAP,S 15P-50 J CH<ZRNDM,YZRNDM>
C120	87-010-312-080		C-CAP,S 15P-50 CH<YZRNDCM,ZRDM>
C121	87-010-312-020		C-CAP,S 15P-50 J CH<ZRNDM,YZRNDM>
C121	87-010-312-080		C-CAP,S 15P-50 CH<YZRNDCM,ZRDM>
C123	87-010-197-020		C-CAP,S 0.01-25 B<ZRNDM,YZRNDM>
C123	87-010-197-080		CAP, CHIP 0.01 DM<YZRNDCM,ZRDM>
C124	87-010-071-080		CAP, ELECT 1-50 M 5L SRE
C126	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C126	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C130	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C130	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C132	87-010-405-080		CAP, ELECT 10-50V
C133	87-010-314-020		C-CAP,S 22P-50 CH<ZRNDM,YZRNDM>
C133	87-010-314-080		C-CAP,S 22P-50V<YZRNDCM,ZRDM>
C140	87-010-322-020		C-CAP,S 100P-50 CH<ZRNDM,YZRNDM>
C140	87-010-322-080		C-CAP,S 100P-50 CH<YZRNDCM,ZRDM>
C151	87-010-405-080		CAP, ELECT 10-50V
C152	87-010-415-080		CAP ELE SRE 10-50V
C201	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C201	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C202	87-010-382-080		CAP, ELECT 22-25V
C203	87-010-318-020		C-CAP,S 47P-50 CH<ZRNDM,YZRNDM>
C203	87-010-318-080		C-CAP,S 47P-50 CH<YZRNDCM,ZRDM>
C204	87-010-318-020		C-CAP,S 47P-50 CH<ZRNDM,YZRNDM>
C204	87-010-318-080		C-CAP,S 47P-50 CH<YZRNDCM,ZRDM>
C205	87-010-178-020		C-CAP,S 1000-50 B<ZRNDM,YZRNDM>
C205	87-010-178-080		CHIP CAP 1000P<YZRNDCM,ZRDM>
C206	87-010-322-020		C-CAP,S 100P-50 CH<ZRNDM,YZRNDM>
C206	87-010-322-080		C-CAP,S 100P-50 CH<YZRNDCM,ZRDM>
C207	87-012-156-020		C-CAP,S 220P-50 CH<ZRNDM,YZRNDM>
C207	87-012-156-080		C-CAP,S 220P-50 CH<YZRNDCM,ZRDM>
C211	87-010-260-080		CAP, ELECT 47-25V
C220	87-010-197-020		C-CAP,S 0.01-25 B<ZRNDM,YZRNDM>
C220	87-010-197-080		CAP, CHIP 0.01 DM<YZRNDCM,ZRDM>
C230	87-010-178-020		C-CAP,S 1000-50 B<ZRNDM,YZRNDM>
C230	87-010-178-080		CHIP CAP 1000P<YZRNDCM,ZRDM>
C351	87-010-197-020		C-CAP,S 0.01-25 B<ZRNDM,YZRNDM>
C351	87-010-197-080		CAP, CHIP 0.01 DM<YZRNDCM,ZRDM>
C352	87-016-251-040		CAP,E 220-16 SMG
C353	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C353	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C361	87-010-403-080		CAP, ELECT 3.3-50V
C362	87-010-403-080		CAP, ELECT 3.3-50V
C501	87-016-459-040		CAP,E 470-10 SMG
C502	87-010-197-020		C-CAP,S 0.01-25 B<ZRNDM,YZRNDM>
C502	87-010-197-080		CAP, CHIP 0.01 DM<YZRNDCM,ZRDM>
C503	87-010-263-080		CAP, ELECT 100-10V
C504	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C504	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C505	87-010-197-020		C-CAP,S 0.01-25 B<ZRNDM,YZRNDM>
C505	87-010-197-080		CAP, CHIP 0.01 DM<YZRNDCM,ZRDM>
C506	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C506	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C507	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C507	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C508	87-010-073-080		CAP,E 3.3-50 5L
C509	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C509	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C510	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C510	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C511	87-016-459-040		CAP,E 470-10 SMG
C520	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C520	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
C901	87-010-260-040		CAP,E 47-25 SME
C902	87-010-196-020		C-CAP,S 0.1-25 Z F GRM <ZRNDM,YZRNDM>
C902	87-010-196-080		CHIP CAPACITOR,0.1-25 <YZRNDCM,ZRDM>
CN1	87-A60-424-010		CONN,16P V TOC-B
CN202	87-A60-154-010		CONN,6P H FE
CN231	87-A60-162-010		CONN,14P H FE
CON2	87-A60-623-010		CONN,6P V 2MM JMT
CON3	87-A60-133-010		CONN,8P V FE
L501	87-003-102-080		COIL, 10UH
LED901	87-A40-558-010		LED,SLZ-8128A-01-A
M601	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
⚠PR201	87-026-689-080		PROTECTOR,1A 60V 491
⚠PR350	87-A90-246-080		PROTECTOR,0.25A 60 4
S353	87-036-109-010		PUSH SWITCH
SW351	87-036-109-010		PUSH SWITCH
SW352	87-036-109-010		PUSH SWITCH
X101	87-030-270-080		VIB,XTAL 16.9344MHZ
LED C.B<ZRDM>			
LED701	87-017-733-080		LED,SEL1250SM<ZRDM>
LED702	87-017-350-080		LED,SEL1550CM<ZRDM>
LED703	87-017-733-080		LED,SEL1250SM<ZRDM>
T-T C.B			
C411	87-A11-148-080		CAP,TC U 0.1-50 Z F
CON8	87-A60-156-010		CONN,8P H FE
LED411	87-070-288-010		LED,GL380
M401	87-A90-036-010		MOT ASSY,RF-300CA-11
PS401	87-A90-156-010		SNSR,SG-240
S401	87-036-109-010		PUSH SWITCH
CD MOTOR C.B			
M20	87-045-358-010		MOT,RF-310TA 43
M21	87-045-356-010		MOT,RF-310TA 30
PIN3	87-A60-670-010		CONN,6P H 2MM JMT
SW1	87-A90-042-010		SW,LEAF MSW-17310MVP0

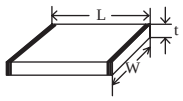
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

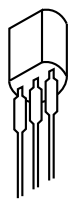
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

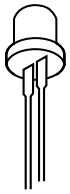
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION

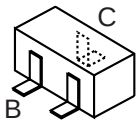


KTA1266

2SC2001
2SD2172



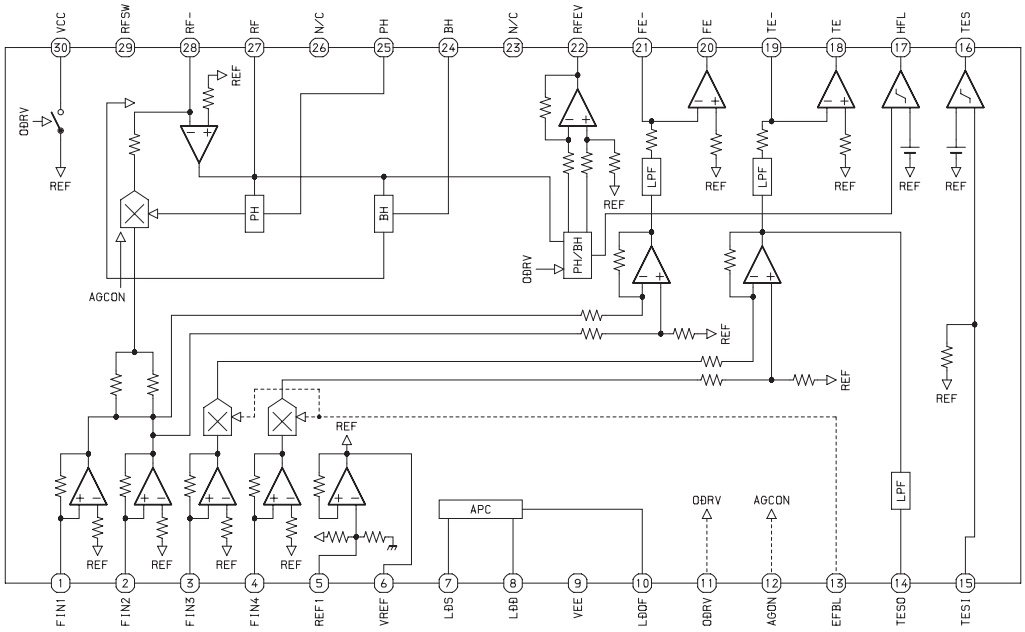
PT380F



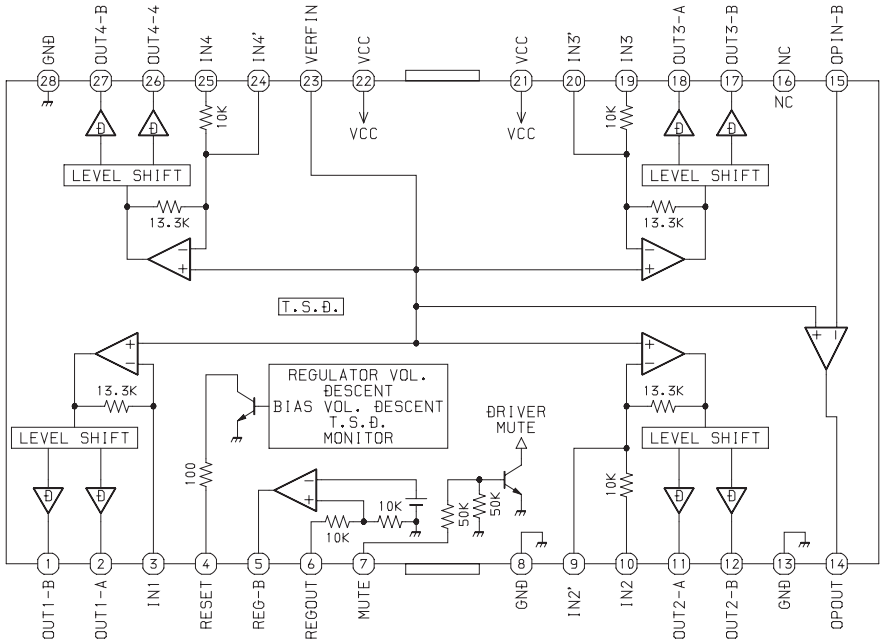
2SA1235
2SC3052
CSA952K
DTC123JK
DTC143TK

IC BLOCK DIAGRAM

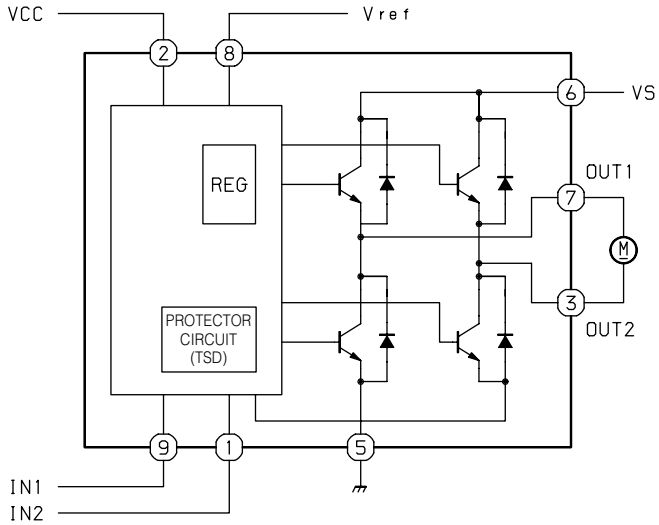
IC, LA9235M



IC, BA6998FP



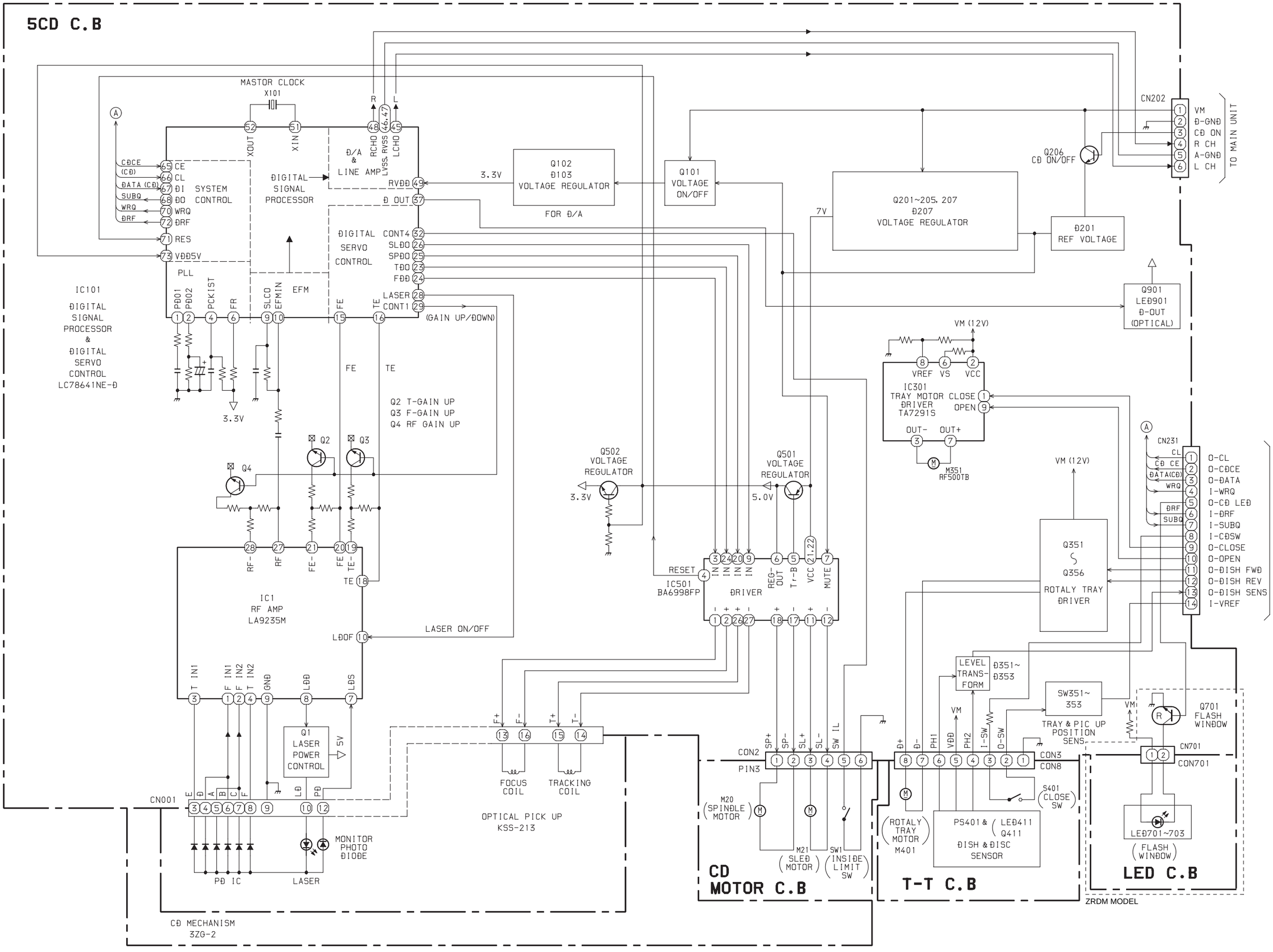
IC, TA7291S



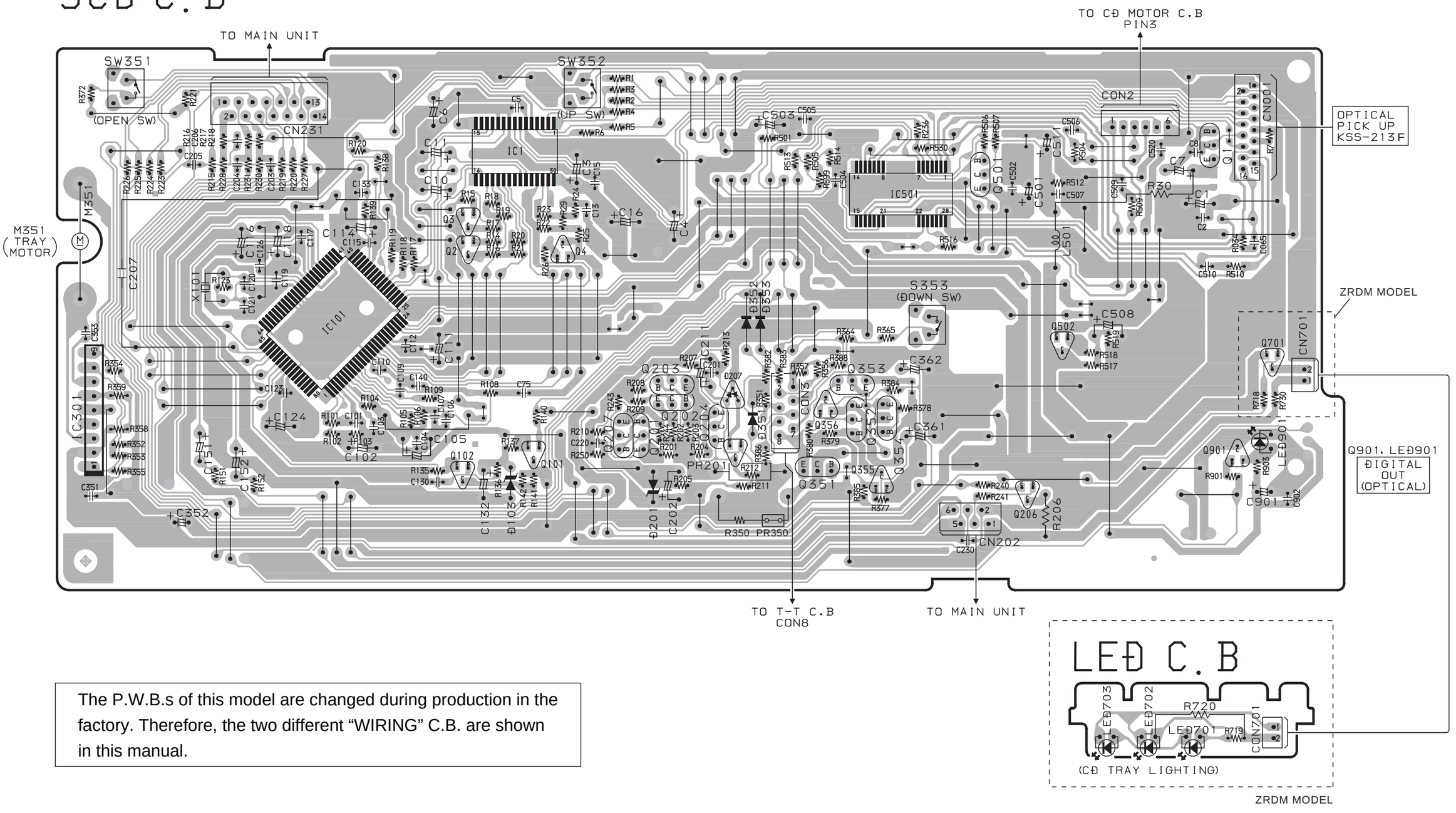
INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

∞ : HI IMPEDANCE

NOTE : INPUT "H" ACTIVE


5CD C.B
MASTOR CLOCK
X101
XOUT
XIN
Đ/A & LINE AMP
RCHO
LVSS, RVSS
LCHO
R
L
CN202
VM
Đ-GNĐ
CĐ ON
R CH
A-GNĐ
L CH
TO MAIN UNIT
Q206
CĐ ON/OFF
CĐCE
(CĐ)
ĐATA (CĐ)
SUBQ
WRQ
ĐRF
CE
CL
ĐI
ĐO
WRQ
ĐRF
SYSTEM CONTROL
RES
VĐĐ5V
ĐIGITAL SIGNAL PROCESSOR
RVĐĐ
Đ OUT
3.3V
Q102
Đ103
VOLTAGE REGULATOR
FOR Đ/A
Q101
VOLTAGE ON/OFF
7V
Q201~205, 207
Đ207
VOLTAGE REGULATOR
Đ201
REF VOLTAGE
ĐIGITAL SERVO CONTROL
CONT4
SLĐO
SPĐO
TĐO
FĐĐ
LASER
CONT1
(GAIN UP/ĐOWN)
Q901
LEĐ901
Đ-OUT
(OPTICAL)
IC101
ĐIGITAL SIGNAL PROCESSOR & ĐIGITAL SERVO CONTROL LC78641NE-Đ
PLL
EFM
PĐO1
PĐO2
PCK1ST
FR
SLCO
EFMIN
FE
TE
3.3V
FE
TE
Q2 T-GAIN UP
Q3 F-GAIN UP
Q4 RF GAIN UP
Q2
Q3
Q4
VM (12V)
VREF
VS
VCC
IC301
TRAY MOTOR ĐRIVER
TA7291S
CLOSE
OPEN
OUT-
OUT+
M351
RF500TB
CN231
CL
CĐ CE
ĐATA(CĐ)
WRQ
ĐRF
SUBQ
O-CL
O-CĐCE
O-ĐATA
I-WRQ
O-CĐ LEĐ
I-ĐRF
I-SUBQ
I-CĐSW
O-CLOSE
O-OPEN
O-ĐISH FWĐ
O-ĐISH REV
O-ĐISH SENS
I-VREF
Q502
VOLTAGE REGULATOR
3.3V
Q501
VOLTAGE REGULATOR
5.0V
VM (12V)
Q351
Q356
ROTALY TRAY ĐRIVER
RESET
IC501
BA6998FP
ĐRIVER
IN1
IN2
IN3
IN4
REG-OUT
Tr-B
VCC
MUTE
RF-
RF
FE-
FE
TE-
TE
IC1
RF AMP
LA9235M
LĐOF
LASER ON/OFF
T IN1
F IN1
F IN2
T IN2
GNĐ
LĐĐ
LĐS
Q1
LASER POWER CONTROL
5V
F+
F-
T+
T-
FOCUS COIL
TRACKING COIL
OPTICAL PICK UP
KSS-213
CN001
E
Đ
A
B
C
F
LĐ
PĐ
PĐ IC
LASER
MONITOR PHOTO ĐIOĐE
CĐ MECHANISM
3ZG-2
CON2
PIN3
SP+
SP-
SL+
SL-
SW IL
M20
SPINĐLE MOTOR
M21
SLEĐ MOTOR
SW1
INSIĐE LIMIT SW
CD MOTOR C.B
Đ+
Đ-
PH1
VĐĐ
PH2
I-SW
O-SW
CON3
CON8
LEVEL TRANS-FORM
Đ351~ Đ353
SW351~ 353
TRAY & PIC UP POSITION SENS
S401
CLOSE SW
ROTALY TRAY MOTOR
M401
PS401 & ĐISH & ĐISC SENSOR
LEĐ411
Q411
T-T C.B
VM
Q701
FLASH WINĐOW
CN701
CON701
LEĐ701~703
(FLASH WINĐOW)
LED C.B
ZRDM MODEL

5CD C.B



The P.W.B.s of this model are changed during production in the factory. Therefore, the two different “WIRING” C.B. are shown in this manual.

5CĐ C.B

TO MAIN UNIT

TO CĐ MOTOR C.B
PIN3

SW351
(OPEN SW)

SW352
(UP SW)

CN231

CON2

CN001

OPTICAL
PICK UP
KSS-213F

M351

M351
TRAY
(MOTOR)

IC1

IC101

IC501

X101

S353
(ĐOWN SW)

ZRDM MODEL

CN701

Q901, LEĐ901
ĐIGITAL
OUT
(OPTICAL)

IC301

Q203

Q202

Q201

Q207

Q204

Q353

Q356

Q354

Q355

Q351

Q502

Q501

Q701

Q901

Q102

Q101

Q206

CON3

CN202

FB201

FB202

FB203

FB902

FB901

PR201

PR350

R350

C352

C230

TO T-T C.B
CON8

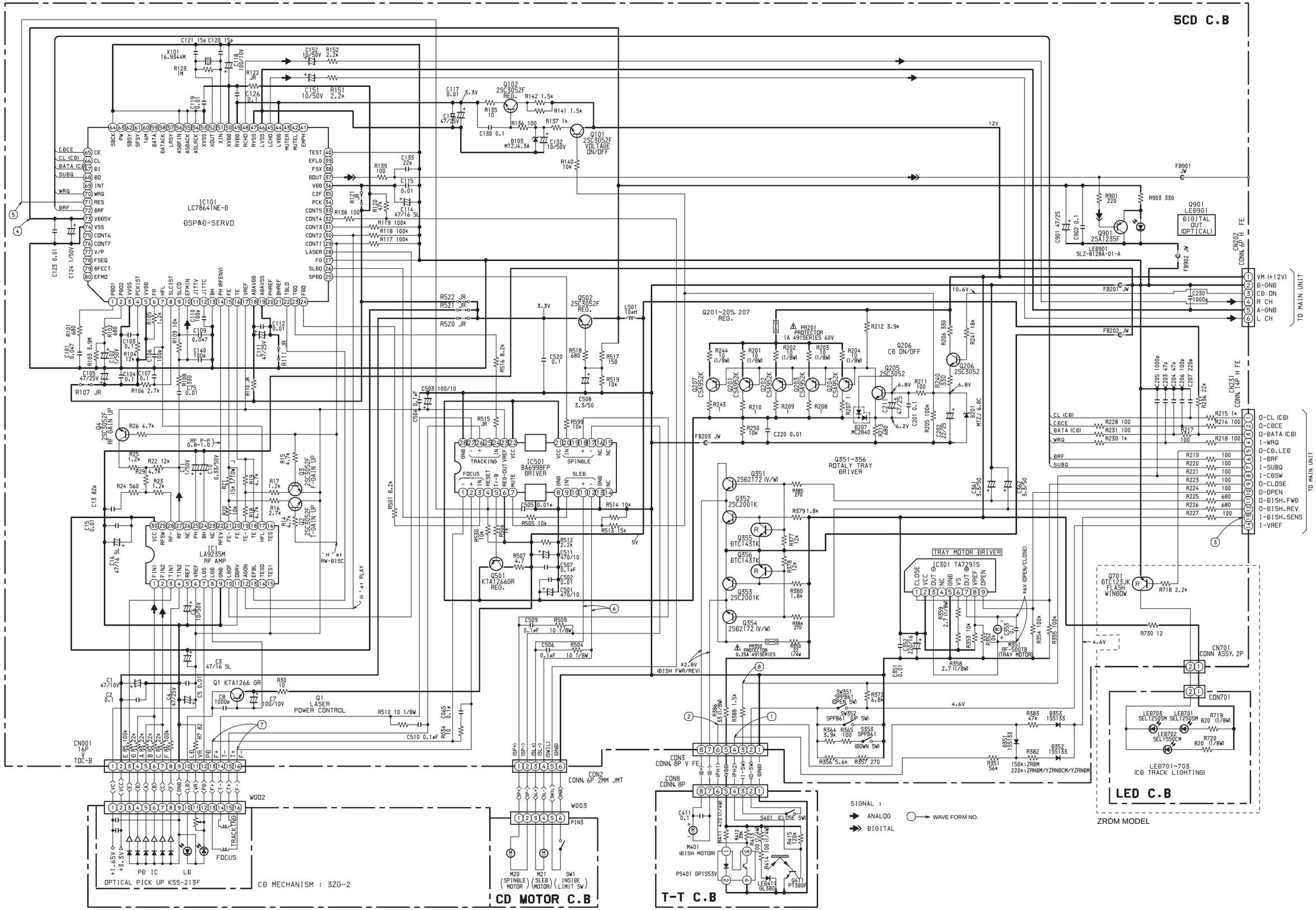
TO MAIN UNIT

The P.W.B.s of this model are changed during production in the factory. Therefore, the two different “WIRING” C.B. are shown in this manual.

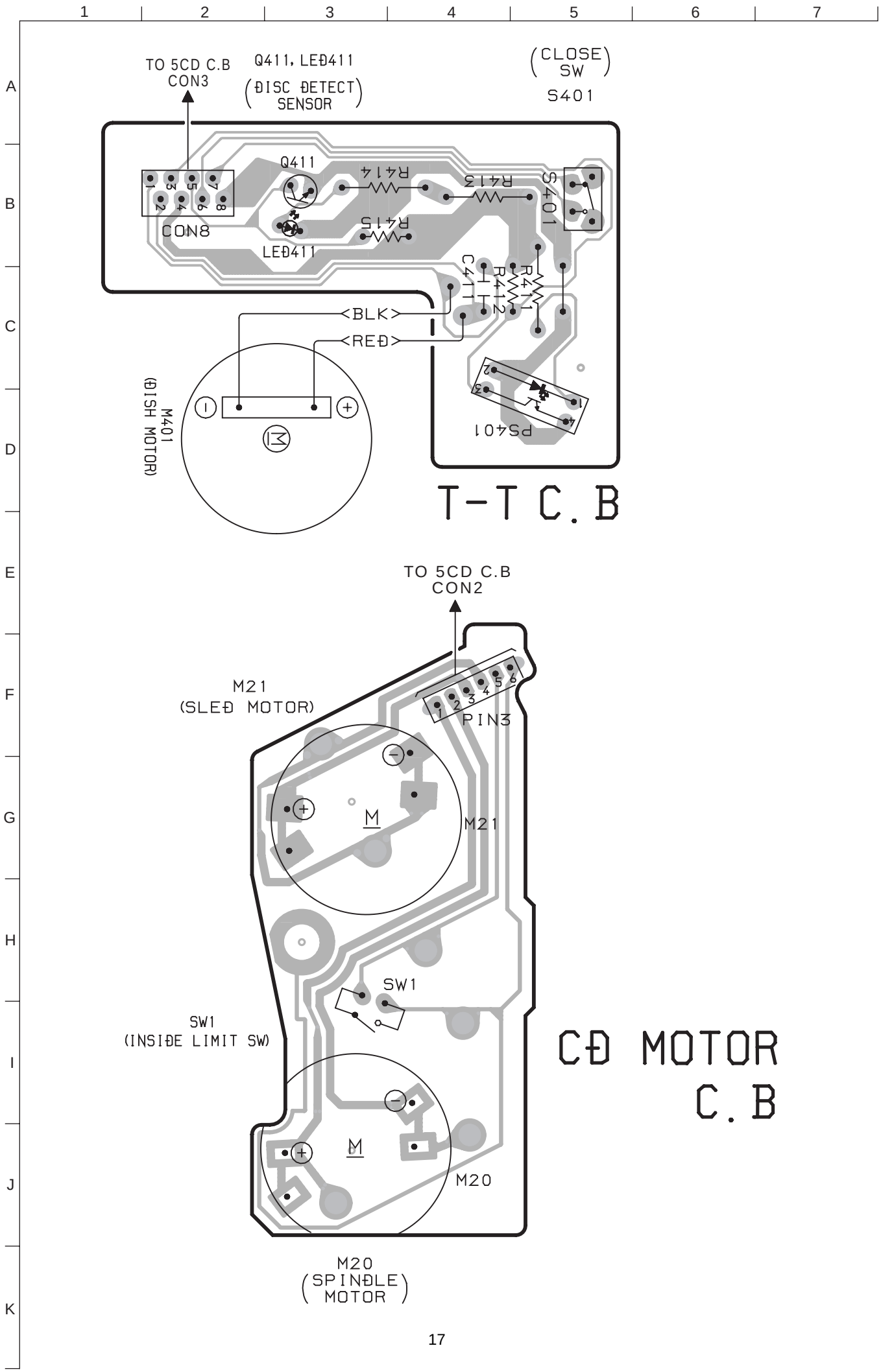
LEĐ C.B

LEĐ703
LEĐ702
LEĐ701
R720
R719
CN701
(CĐ TRAY LIGHTING)

ZRDM MODEL


5CD C.B
IC101
LC78641NE-Ð
ÐSP&Ð-SERVO
IC LA9235M
RF AMP
RF-DISC
H : at PLAY
OPTICAL PICK UP KSS-213F
CÐ MECHANISM : 3ZG-2
PÐ IC
LÐ
TRACKING
FOCUS
IC501
BA6998FP
ÐRIVER
SPINDLE
SLED
TRACKING
FOCUS
M20
(SPINDLE)
MOTOR
M21
(SLED)
MOTOR
SW1
INSIDE
LIMIT SW
CD MOTOR C.B
Q1
LASER
POWER CONTROL
Q1 KTA1266 GR
Q501
KTA1266GR
REG.
Q502
2SC3052F
REG.
Q101
2SC3052F
VOLTAGE
ON/OFF
Q102
2SC3052F
REG.
Q201~205, 207
REG.
Q206
CÐ ON/OFF
Q205
2SC3052
Q206
2SC3052
Q207
CSA952K
Q201
CSA952K
Q202
CSA952K
Q203
CSA952K
Q204
CSA952K
PR201
PROTECTOR
1A 491SERIES 60V
Q351~356
ROTALY TRAY
ÐRIVER
Q351
2SD2172 (V/W)
Q352
2SC2001K
Q355
ÐTC143TK
Q356
ÐTC143TK
Q353
2SC2001K
Q354
2SD2172 (V/W)
PR350
PROTECTOR
0.25A 491SERIES
TRAY MOTOR ÐRIVER
IC301 TA7291S
M351
RF-500TB
(TRAY MOTOR)
Q901
LED901
ÐIGITAL
OUT
(OPTICAL)
Q901
2SA1235F
LED901
SLZ-B128A-01-A
Q701
ÐTC123JK
FLASH
WINDOW
LED701~703
(CÐ TRACK LIGHTING)
LED C.B
ZRDM MODEL
CN701
CONN ASSY. 2P
CON701
CN231
CONN 14P H FE
CN202
CONN 6P H FE
TO MAIN UNIT
VM (+12V)
Ð-GNÐ
CÐ ON
R CH
A-GNÐ
L CH
O-CL (CÐ)
O-CBCE
O-ÐATA (CÐ)
I-WRQ
O-CÐ.LEÐ
I-ÐRF
I-SUBQ
I-CÐSW
O-CLOSE
O-OPEN
O-ÐISH.FWÐ
O-ÐISH.REV
I-ÐISH.SENS
I-VREF
CON3
CONN 8P V FE
CON8
CONN 8P
CON2
CONN 6P 2MM JMT
CN001
16P
V
TOC-B
W002
W003
PIN3
T-T C.B
SIGNAL :
ANALOG
ÐIGITAL
WAVE FORM NO.
12V
10.6V
4.6V
3.3V
±2.8V
(ÐISH FWR/REV)
±6V (OPEN/CLOSE)
M401
(ÐISH MOTOR)
PS401 GP1S53V
LED411
GL380
Q411
PT380F

WIRING-2 (T-T/CD MOTOR)



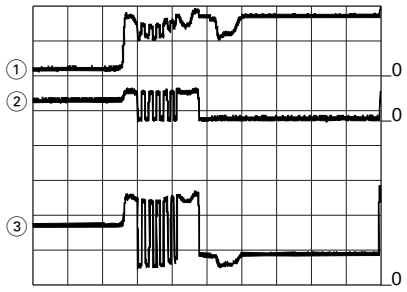
WAVE FORM

① CON3 Pin ④ (PH2) VOLT/DIV: 5V
TIME/DIV: 2S

② CON3 Pin ⑥ (PH1) VOLT/DIV: 10V
TIME/DIV: 2S

③ CN231 Pin ⑬ (I-DISH. SENS) VOLT/DIV: 2V
TIME/DIV: 2S

(NO DISC)

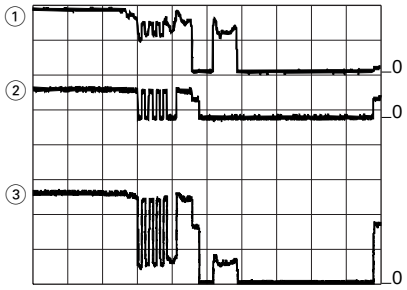


① CON3 Pin ④ (PH2) VOLT/DIV: 5V
TIME/DIV: 2S

② CON3 Pin ⑥ (PH1) VOLT/DIV: 10V
TIME/DIV: 2S

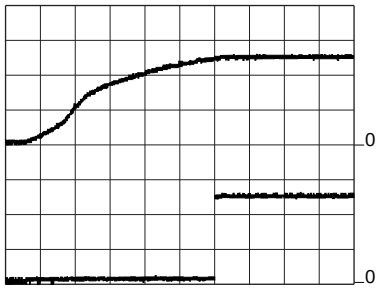
③ CN231 Pin ⑬ (I-DISH. SENS) VOLT/DIV: 2V
TIME/DIV: 2S

(YES DISC)

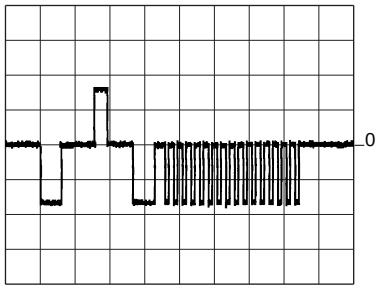


④ IC101 Pin ⑬ VDD5V VOLT/DIV: 2V
TIME/DIV: 5mS

⑤ IC101 Pin ⑪ RES VOLT/DIV: 2V
TIME/DIV: 5mS

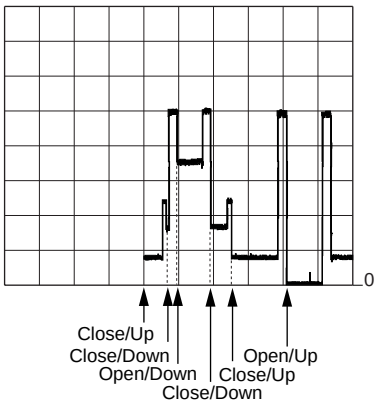


⑥ Between IC501 VOLT/DIV: 1V
Pin ⑪ (SLED+) and ⑫ (SLED–) TIME/DIV: 2S
(Shutter Close)



⑦ Between CN001 VOLT/DIV: 1V
Pin ⑬ (F+) and ⑯ (F–) TIME/DIV: 5S
(Focus Search)

⑧ R388 VOLT/DIV: 1V
TIME/DIV: 5S



TEST MODE

1. How to Activate CD Test Mode
   Insert the AC plug while pressing the CD function button.
   When activating the test mode, “TEST” appears on the screen then all indicators light (start mode).

2. How to Cancel the CD Test Mode
   Press the POWER button or disconnect the AC plug.
   * When pressing any other function key during playback, the test mode is released.

3. Functions and Applications of CD Test Mode

Mode/No.	Operation key	Display	Operation	Check contents
Start mode No.1		All lamps light	• All FLs light	• FL check • Microprocessor check
Search mode No.2	STOP key	CD	• Laser diode always turns ON • Focus search continuos operation *1 • Spindle motor continuos kick	• APC circuit check • Laser current measurement • Focus search waveform check • Focus error waveform check (DPR is ignored during search mode.)
Play mode No.3	PLAY key	Normal	• Normal playback • Focus search is continued if TOC cannot be read.	• Each servo circuit check • DPR check
Traverse mode No.4	PAUSE key	Normal	• Tracking servo OFF/ON Repeats OFF and ON every time the PAUSE key is pressed.	• Tracking balance check
Sled mode No.5	FF key	CD TEST	• Pickup moves to the innermost track *2 The lens is kicked to the innermost track simultaneously.	• Sled circuit check • Tracking circuit check • Mechanism operation check • PU check
	RWD key	CD TEST	• Pickup moves to the outermost track *2 The lens is kicked to the outermost track simultaneously.	
Spindle mode No.6	TAPE REC key	All lamps light	• The spindle motor is rotated forward (rough speed) by pressing the key. It is rotated reverse by pressing the key again. It is stopped by another pressing of the button.	• Spindle circuit check • Spindle motor check
RF AGC mode No.7	TUNER key	AGC ON/OFF	• Repeats ON and OFF every time the TUNER key is pressed. • To return to the start mode display, press the CD key three times.	• PC good or no good check • RF AMP circuit check

*1 ..... There are cases when the focus search cannot be operated owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases turn off the power, wait for a while, then re-start the machine.

*2 ..... To avoid damage to the gears, do not keep pressing the FF or RWD key when the pickup is at the outermost or innermost track, because the sled motor keeps running while the FF or RWD key is pressed when the pick-up is at the outermost or innermost track.

4. Adjustment Result Display of Auto Adjustment Items
The auto adjustment values of the focus and the tracking can be displayed on the screen.

4-1. Auto Adjustment Result Display of Focus Offset Cancel/Gain

1) Set the start mode (all lamps light).
2) Press the TAPE key until “F***” appears. Select ON or OFF of the adjustment items. (Refer to the table below.)
3) Press the PLAY key to play back the CD.
4) Press the CD key.
5) The auto adjustment value “F******” appears on the display. (Refer to the table below.)
6) After checking, press the CD key twice to return to the play mode (normal display).

Adjustment item (ON = 1, OFF = 0)				Auto adjustment value display (* is hexadecimal.)			
F	OFFSET	BIAS	GAIN	F	OFFSET	BIAS	GAIN
F	0	0	0	F	No display	No display	No display
F	1	1	1	F	**	**	**
F	1	1	0	F	**	**	No display
F	1	0	1	F	**	No display	**
F	1	0	0	F	**	No display	No display
F	0	1	1	F	No display	**	**
F	0	1	0	F	No display	**	No display
F	0	0	1	F	No display	No display	**

∗ When nothing is displayed (No display), a blank equal to two characters is created on the display.

4-2. Auto Adjustment Result Display of Tracking Offset Cancel/Balance/Gain

1) Set the start mode (all lamps light).
2) Keep pressing the AUX key until “T***” appears. Select ON or OFF for each adjustment item. (Refer to the table below.)
3) Press the PLAY key to play back the CD.
4) Press the CD key twice.
5) The auto adjustment value “T******” appears on the display. (Refer to the table below.)
6) After checking, press the CD key once to return to the play mode (normal display).

Adjustment item (ON = 1, OFF = 0)				Auto adjustment value display (* is hexadecimal.)			
T	OFFSET	BALANCE	GAIN	F	OFFSET	BALANCE	GAIN
T	0	0	0	T	No display	No display	No display
T	1	1	1	T	**	**	**
T	1	1	0	T	**	**	No display
T	1	0	1	T	**	No display	**
T	1	0	0	T	**	No display	No display
T	0	1	1	T	No display	**	**
T	0	1	0	T	No display	**	No display
T	0	0	1	T	No display	No display	**

∗ When nothing is displayed (No display), a blank equal to two characters is created on the display.

IC DESCRIPTION

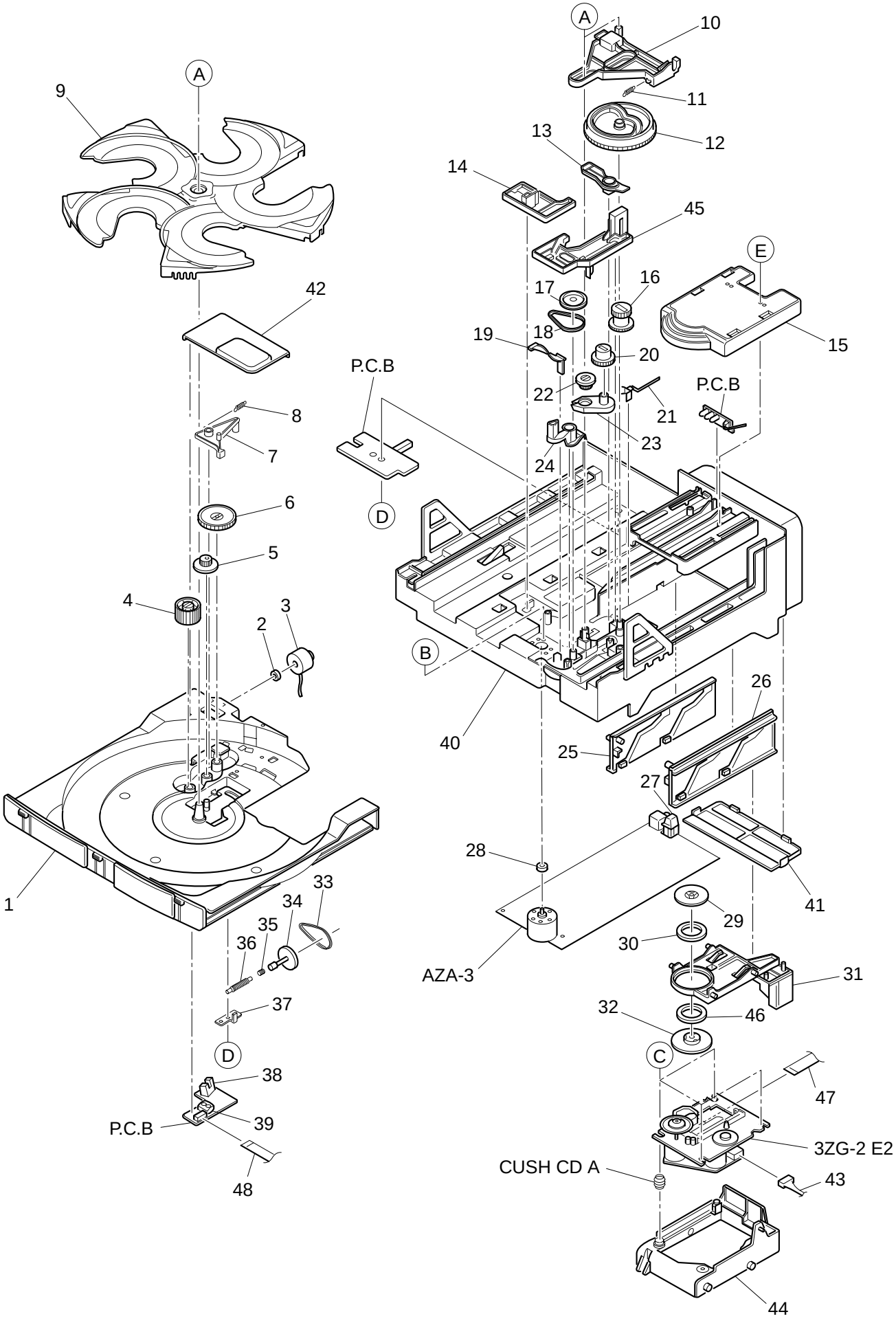
IC, LC78641NE-D

Pin No.	Pin Name	I/O	Description
1	PDO1	O	Internal VCO control phase comparator output pin. (Pull down)
2	PDO2	O	Internal VCO control phase comparator output pin. OFF for rough servo, ON for phase servo. (Pull down)
3	VVSS	—	Internal VCO ground pin.
4	PCKIST	—	PDO output current adjustment resistor connection pin.
5	VVDD	—	Internal VCO power supply pin.
6	FR	—	VCO frequency range adjustment resistor connection pin. (Pull up)
7	HFL	I	Mirror detection signal input pin.
8	SLCIST	—	SLCO output current adjustment resistor connection pin.
9	SLCO	O	Control output.
10	EFMIN	I	EFM signal input pin.
11	JITTV	O	Jitter detection monitor pin. (Not connected)
12	JITTC	O	Jitter detection adjustment pin. (Pull down)
13	BH	I	BH signal input pin. (Connected to GND)
14	PH (RFENV)	I	PH signal or RFENV signal input pin.
15	FE	I	FE signal input pin.
16	TE	I	TE signal input pin.
17	VREF	I	VREF input pin.
18	ADAVDD	—	Servo A/D, D/A power supply pin.
19	ADAVSS	—	Servo A/D, D/A ground pin.
20	PHREF	O	PH reference output pin. (Not connected)
21	BHREF	O	BH reference output pin. (Not connected)
22	TBLO	O	Tracking balance output pin.
23	TDO	O	Tracking control output pin.
24	FDO	O	Focus control output pin.
25	SPDO	O	Spindle control output pin.
26	SLDO	O	Thread control output pin.
27	DVREF/FG	I/O	Output driver VREF output pin. FG signal input pin. (Connected to GND)
28	LASER	O	Laser ON/OFF control pin.
29	CONT1	I/O	General-purpose input/output pin 1. (Connected to GND)
30	CONT2	I/O	General-purpose input/output pin 2. (Connected to GND)
31	CONT3	I/O	General-purpose input/output pin 3. (Connected to GND)
32	CONT4	I/O	General-purpose input/output pin 4.
33	CONT5	I/O	General-purpose input/output pin 5. (Not connected)
34	PCK	O	EFM data playback clock monitor pin. Average 4.3218MHz when the phase is locked. (Not connected)
35	C2F	O	C2 flag output pin. (Not connected)
36	VDD	—	Digital power supply pin.
37	DOUT	O	Digital out output pin. (EIAJ format)
38	FSX	O	Output pin for the 7.35kHz synchronization signal divided from the crystal oscillator. (Not connected)

Pin No.	Pin Name	I/O	Description
39	EFLG	O	C1, C2 error correction monitor pin. (Not connected)
40	TEST	I	Test input pin. (Connected to GND)
41	EMPH	I/O	Emphasis pin. Which becomes an input pin after reset and can be controlled externally. This becomes an emphasis monitor pin under control by command. (Not connected)
42	MUTEL	O	L channel mute output pin. (Not connected)
43	MUTER	O	R channel mute output pin. (Not connected)
44	LVDD	—	L channel power supply pin.
45	LCHO	O	L channel output pin.
46	LVSS	—	L channel ground pin.
47	RVSS	—	R channel ground pin.
48	RCHO	O	R channel output pin.
49	RVDD	—	R channel power supply pin.
50	XVDD	—	Crystal oscillator power supply pin.
51	XIN	I	Connections for a 16.9344MHz crystal oscillator pin.
52	XOUT	O	
53	XVSS	—	Crystal oscillator ground pin.
54	ASLRCK	I	L/R clock input pin. (Connected to GND)
55	ASDACK	I	Bit clock input pin. (Connected to GND)
56	ASDFIN	I	L/R channel data input pin. (Connected to GND)
57	LRSY	O	L/R clock output pin. (Not connected)
58	DATACK	O	Bit clock output pin. (Not connected)
59	DATA	O	L/R channel data output pin. (Not connected)
60	16M	O	16.9344MHz output pin. (Not connected)
61	SFSY	O	Subcode frame synchronization signal output pin. This signal falls when the subcode is in the standby state. (Not connected)
62	SBSY	O	Subcode clock synchronization signal output pin. (Not connected)
63	PW	O	Subcode P, Q, R, S, T, U and W output pin. (Not connected)
64	SBCK	I	Subcode readout clock input pin. (Connected to GND)
65	CE	I	Chip enable signal input pin.
66	CL	I	Data transfer clock input pin.
67	DI	I	Data input pin.
68	DO	O	Data output pin.
69	INT	O	Interruption signal output pin. (Not connected)
70	WRQ	O	Interruption signal output pin.
71	RES	I	Reset input pin. This pin must be set low briefly after power is first applied.
72	DRF	O	Focus ON detect pin.
73	VDD5V	—	Microprocessor interface power supply.
74	VSS	—	Digital ground pin.
75	CONT6	I/O	General-purpose input/output pin 6. (Not connected)
76	CONT7	I/O	General-purpose input/output pin 7. (Not connected)
77	V/P	O	Rough servo/phase control automatic switching monitor output pin. “H” for rough servo and “L” for phase servo. (Not connected)

Pin No.	Pin Name	I/O	Description
78	FSEQ	O	Synchronization signal detection output pin. Outputs a high level when the synchronization signal detected from the EFM signal and the internally generated synchronization signal agree. (Not connected)
79	DEFECT	I/O	Defect pin. Which becomes an input pin after reset and can be controlled externally. This becomes the defect monitor pin under control by command. (Not connected)
80	EFMO	O	EFM signal output pin. (Not connected)

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL PARTS LIST 1/1

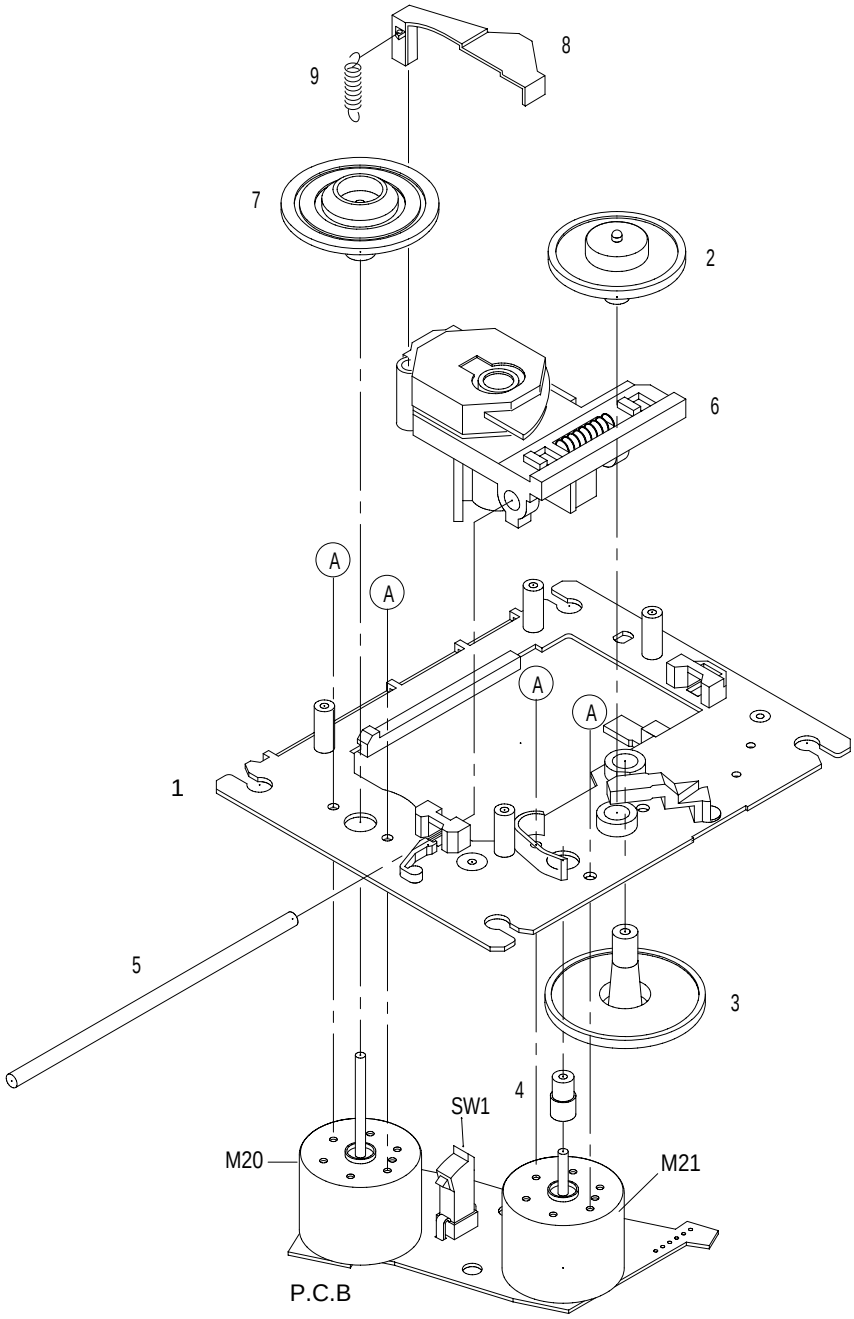
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZG1-001-410		TRAY,5CD
2	84-ZG1-267-010		PULLEY,LOAD MO 8
3	87-A90-036-010		MOT ASSY,RF-300CA-11
4	86-ZG1-228-110		GEAR,TT-B
5	86-ZG1-227-110		GEAR,TT-A
6	86-ZG1-223-110		GEAR,WORM-WHEEL TT
7	86-ZG1-224-110		LEVER,TT(*)
8	86-ZG1-226-010		SPR-E,LEVER TT
9	86-ZG1-002-210		TURN TABLE,5CD
10	86-ZG1-211-210		JOINT,CAM
11	86-ZG1-216-010		SPR-E,JT
12	86-ZG1-203-210		GEAR,MAIN CAM
13	86-ZG1-213-110		LEVER,LOAD
14	86-ZG1-214-110		LEVER,PROTECT
15	86-ZG1-004-010		REFLECTOR,CD<ZRDM>
16	86-ZG1-205-110		GEAR,TRAY
17	84-ZG1-207-010		PULLEY,RELAY
18	84-ZG1-209-010		BELT,SQ1.8-117.7
19	86-ZG1-217-010		LEVER,SW
20	86-ZG1-206-110		GEAR,RELAY B
21	86-ZG1-220-110		SPR-P,LOCK
22	86-ZG1-204-110		GEAR,RELAY A
23	86-ZG1-218-110		PLATE,GEAR
24	86-ZG1-208-010		LEVER,TRAY
25	86-ZG1-209-110		SLIDER,CAM L(*)
26	86-ZG1-210-110		SLIDER,CAM R(*)
27	84-ZG1-244-310		CABI,OPTICAL
28	84-ZG2-228-010		PULLEY,MOT
29	86-ZG1-239-110		PLATE,DISC
30	83-ZG3-604-010		RING,MAG 2
31	86-ZG1-215-010		HLDR,CHUCK
32	86-ZG1-238-010		HLDR,MAGNET 6ZG N
33	86-ZG1-225-010		BELT,SQ1.2-32.9
34	86-ZG1-221-010		PULLEY,TT
35	86-ZG1-231-010		SPR-C,WORM
36	84-ZG1-256-010		GEAR,WORM N2
37	86-ZG1-232-010		SPR-P,WORM
38	86-ZG1-229-010		HLDR,SENSOR
39	86-ZG1-230-010		HLDR,DISC SENSOR
40	86-ZG1-201-310		CHAS,MECHA
41	86-ZG1-005-110		COVER,CHAS
42	86-ZG1-003-110		COVER,TRAY<ZRDM>
43	86-ZG1-609-010		CONN ASSY,6P<EXCEPT YZRNDCM>
44	86-ZG1-202-210		HLDR,MECHA
45	86-ZG1-212-410		SLIDER,LOAD
46	83-ZG3-211-010		PLATE,DISC
47	86-ZG1-605-010		CABLE,FFC 16P<EXCEPT YZRNDCM>
48	86-ZG1-667-010		F-CABLE,8P 1.25 175MM BLACK
A	87-078-148-010		VFT2+3-12(F10) BLK
B	87-251-072-410		U+2.6-5
C	81-ZG1-254-010		S-SCREW,MECH HLDR
D	87-067-579-010		TAPPING SCREW, BVT2+3-8
E	87-067-703-010		TAPPING SCREW, BVT2+3-10<ZRDM>

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

CD MECHANISM EXPLODED VIEW 1/1 (3ZG-2E2)



CD MECHANISM PARTS LIST 1/1 (3ZG-2E2)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-246-310		CHAS ASSY,SHT 5
2	83-ZG2-235-010		GEAR,A3
3	83-ZG2-205-210		GEAR,B
4	83-ZG2-236-010		GEAR,MOTOR 3
5	83-ZG2-253-110		SHAFT,SLIDE 5
6	87-A90-836-010		PICKUP,KSS-213F
7	83-ZG2-254-010		TURN TABLE,C5
8	83-ZG2-245-510		LEVER,SHUTTER(*)
9	83-ZG2-250-110		SPR-E,SHT 2
A	87-261-032-210		V+2-3

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

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